PAPERS

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LAID BEFORE

THE LEGISLATIVE COUNCIL OF CEYLON

DURING

THE SESSION OF 1887.

Opened September 30, 1887; Closed October 8, 1888.

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PROCEEDINGS OF THE LEGISLATIVE COUNCIL.

SECRETARIAT LIBRARY

Friday, September 30, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Sir CECIL CLEMENTI SMITH, K.C.M.G.
The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. G. T. M. O'BRIEN.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RAMA-NATHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

OPENING OF THE SESSION.

1. His Excellency the Governor opened the Session with the following Address:—

HONOURABLE GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I AM commanded by the Queen to convey to you Her Majesty's thanks for the cordial and loyal Address adopted by you on the occasion of the Jubilee of Her Majesty's Accession. I have also received official intimation of the pleasure with which Her Majesty has received accounts of the demonstrations of affection and loyalty which were exhibited throughout the Island on that occasion.

A report of the celebration of the Jubilee will be laid before you. It was my object that as large a number of the people of the Island as possible should take part in this festival, and consequently that it should be celebrated at as many places as practicable. This object was fully attained. A record of the chief events of Her Majesty's reign was read in over seven hundred different localities, and there is hardly a hamlet in the Island where some sign of rejoicing was not displayed in honour of this auspicious event.

The foundation of an Asylum for Incurables has been commenced by public subscription as a permanent local memorial of the year of Jubilee.

We have no reason to be dissatisfied with the development of industrial enterprise in the Colony during the past year. The exports of tea, which in 1884 amounted only to 2,392,975 lb. and in 1885 to 4,372,721 lb., reached 7,849,888 lb. in 1886 and 9,000,186 lb. during the first eight months of the present year. It is therefore probable that in 1887, as in the two previous years, the export of tea will double itself, or nearly double itself, in the course of twelve months.

The export of cacao, which in 1885 had received a temporary check, has assumed larger dimensions than ever, as may be judged from the following table :—

	Cwt.
1884	9,241
1885	7,466
1886	13,056
1887 (first eight months only) ...	15,556

The export of cinchona in 1886 was somewhat, but not very greatly, in excess of that of 1885, and from present appearances it would seem that the returns of the amount shipped in 1887 will not greatly differ from those of 1885 and 1886.

The cultivation of coffee continues to diminish, the export of 1886 amounting to but 183,044 cwt., as against 320,974 cwt. in 1885. At the same time, the leaf-disease appears to be less seriously injurious than in former years to coffee where it is still grown, and the crops raised in Haputalé and some other parts of Uva have been exceptionally fine.

The tonnage of vessels making use of the port of Colombo last year shows an increase of 233,116 tons over that of the vessels frequenting it in 1885.

The Revenue of 1886 amounted to Rs. 12,682,548·78,—an amount slightly exceeding that of 1885.

During the present year the important items of Customs and Railway Receipts have shown a marked improvement on the amounts received under the same heads in 1886. The prolonged drought and consequent failure of crops, however, threaten seriously to affect the Land Revenue.

Up to the end of August the receipts were Rs. 8,628,448, as against Rs. 8,029,764 in 1886. but it is impossible as yet to forecast the total revenue of the year. The last four months of the year are invariably those in which the largest receipts are obtained, and if they only equal those of the corresponding months of 1886,—(I shall be disappointed if they do not surpass them,)—the estimated revenue of Rs. 13,160,930 will be exceeded.

The Expenditure in the Colony has been kept well below the estimated amount during the present year, and was so in 1886: but the anticipated surplus for last year was not realised, in consequence of much heavier demands on the part of the Crown Agents than it had been anticipated would have to be met before its close.

The Estimates for 1888 will shortly be laid before you, and in submitting them for your consideration it will be my duty, as usual, in the Message which accompanies them, to explain them to you in detail.

I have directed the correspondence which has passed between the Secretary of State for the Colonies and myself, on the subject of Railway Extension, to be laid before you. In reply to the despatch of Mr. Secretary Stanhope, of the 7th January last, postponing indefinitely the further consideration of this subject, and declining to recommend the Ordinance No. 2 of 1886 to Her Majesty for confirmation, I ventured to point out the misapprehensions which had been formed on several points, and to request a reconsideration of the Secretary of State's decision. I received a few days ago a reply to this communication. The Secretary of State for the Colonies, although not prepared to accept the calculations of the Railway Commission, admits that a lower rate of working expenses may be anticipated than he had at first supposed, and that consequently the construction of the projected Extension to Haputalé would prove a remunerative undertaking if the whole of the traffic looked for were secured to the line. He is therefore prepared to reconsider the former decision. But the profit realised would, in Sir H. Holland's opinion, be so small that any considerable disappointment in this respect would turn the scale, and representations have been made to the Imperial Government by persons interested in Uva and in railway operations in Ceylon generally, which lead the Secretary of State to doubt whether such traffic can be relied on. Before giving an assent to the scheme, therefore, the Secretary of State requires to be satisfied as to the amount of traffic which the line may be expected to command, and also as to the provision which it is intended to make for the payment of the interest and sinking fund of the loan during the period which must elapse before any receipts can be realised from the new line. The doubts and caution of the Secretary of State are not unnatural, and in the circumstances show only a prudent care to prevent the Colony engaging in an enterprise the risks of which may prove seriously detrimental to its interests. But there will, I think, be no difficulty in satisfying Sir Henry Holland on the second point raised by him, and I trust there may be none as regards the former. That, however, depends, not on the action of the Government, but on that of the planting community. Three years ago the work now contemplated would have been commenced with well-nigh universal approval. It remains to be seen in what light it will be now regarded, when acceptance or rejection of the scheme for extending the existing line to Haputalé becomes once more a practical question. Should it appear that the line when completed will secure the traffic of Uva, its commencement need not be long delayed. Should this not be the case, I fear that all hopes of further Railway Extension eastwards must for some years to come be abandoned; for even if the Imperial Government consented,—which may, perhaps, be doubtful,—to any considerable expenditure in the preparation of alternative schemes of extension to that of which the completion of the detailed drawings has recently been directed by the Secretary of State, it is clear that the full preparation of such schemes in the first place, and their subsequent discussion, would involve delays of very considerable duration.

The Ordinances required to give effect to the new Code of Civil Procedure will shortly be laid before you, and will no doubt receive from you the serious attention which they merit. They have been carefully prepared by a Committee, to which the Judges of the Supreme Court have afforded their valuable assistance; and I have no doubt that improvements will be effected which will be attended with much advantage to the Colony.

Recent decisions of the Supreme Court have shown that the interpretation which has for many years been given to certain clauses of the Masters and Servants Ordinance of 1865 is erroneous. It appears to me but just and reasonable that the law should be brought into conformity with long-established practice, and an Ordinance to effect this object will be submitted for your consideration. Similar judicial decisions would appear to indicate that amendments may also be required in the Cooly Wages Ordinance of 1884.

On opening the Session of 1885 I expressed my desire to submit to you a measure with respect to what are known as the Buddhist Temporalities. This measure, which I was unable from various causes to submit to you at your late Session, will, I trust, be introduced during the present year. I reserve to a later date any detailed description of its provisions. It will not satisfy, on the one hand, those who desire to appropriate to educational or other purposes the whole landed property of the temples, or, on the other, those who desire to keep it for the private use and benefit of the incumbents. The measure has been prepared in concert with several enlightened Buddhist laymen and priests; and while the abstention of the Government from all interference in Buddhist affairs is scrupulously maintained, I trust the provisions of the Ordinance will be found to give to the Buddhist religious community that sound working constitution for the management of their own affairs which they have so long been promised, and at the same time will provide, through a machinery of audit, an effectual check on the many abuses which now make the administration of the property in question a grave and growing scandal.

The Ordinance establishing the Central and Provincial Irrigation Boards, which was passed in the early part of the present year, does not legally come into force until the 1st of January next, but the different Boards have, as an administrative measure, been called into existence, and have been at work during the greater part of the year. Their operation has been thoroughly satisfactory. They have ensured the more full and careful consideration of the different schemes submitted by local authority, and at the same time they have introduced into the conduct of operations a vigour and despatch previously unknown. The Report of the Central Irrigation Board, and the minutes of its meetings, will at the end of the year be laid before you, and will, I think, convince the most incredulous that the claims of small and unostentatious works of irrigation are by no means overlooked in favour of schemes of a more ambitious nature.

I continue to believe that a material change in the laws relating to the distillation and sale of Arrack would be attended with public advantage, and that its results would not be unfavourable to the interests of the Revenue. A Committee of this Council, however, to which the consideration of the scheme prepared by the Auditor-General was referred, has reported unfavourably to the adoption of any change at the present moment; and in the existing condition of the Revenue I am unwilling to charge myself with the responsibility of a measure which, in the opinion of competent judges, might seriously diminish its amount. I trust, however, that the subject will not be lost sight of, and that, on a future day, when the risks attendant on experimental legislation are less serious than they are at present, a real effort will be made to replace the present system by one of a different and more unobjectionable character.

Several Ordinances of minor importance have been prepared and published, and will be brought before you without delay.

In accordance with the resolution of this Council which was passed on the 12th January last, I reported to Her Majesty's Government that this Colony was prepared to undertake its share of the expenditure necessary to place the Town and Harbour of Colombo in a position of defence. I have been since informed that the armament for the Fortifications has been ordered. Meanwhile the construction of the battery at Mutwal has already been commenced, and, so soon as the plans of the battery to be erected on Galle Face have been received, that work will be also pushed forward without delay. The amount expended on these works during the present year will be included in the Supplementary Supply Bill, and a vote taken for the expenses to be incurred next year.

I am unable to give you any information as to the steps which it may be proposed to take to repair the unfortunate and serious failure in the Máligákanda Reservoir. The acknowledgments of the Government are due to the Members of the Committee which was appointed to inquire into the cause of the disaster. Their report,—a very careful and well-reasoned one,—has been submitted to the Secretary of State, and the Chief Resident Engineer, in whose charge the execution of the construction of the Reservoir was placed, has proceeded to England, in order that the Consulting Engineer may have at his disposal all available means for forming an opinion as to the causes of the failure, and as to the best method and probable cost of its repair. In the meantime, it is satisfactory to know that the City of Colombo is now well supplied with a sufficiency of good and wholesome water from the Labugama Reservoir.

Some correspondence has taken place with the Imperial Government and with the Chamber of Commerce here, on the subject of the construction of the Northern Arm of the Harbour, and of a Graving Dock, at Colombo. This correspondence will be laid before you. Its substance may be briefly resumed as follows. The Lords Commissioners of the Admiralty expressed themselves as "disposed to "aid" the construction of a Graving Dock at Colombo, and this Government was requested by the Secretary of State to state whether it had any definite proposal to make upon the subject. The offer was, by my direction, referred to the Chamber of Commerce for its opinion and advice. The Chamber has reported that in its opinion the maintenance of such a dock might properly be undertaken by the Colony, if it were in the first instance constructed at the expense of the Imperial Government, but that the Colony would not be justified in itself undertaking the construction of the work. In this opinion my Executive Council concur; but as the Admiralty has only expressed its disposition to aid such a work, not to undertake it, I fear this response is unlikely to be regarded in the light of a definite proposal on which action can be taken.

I regret to say that the serious drought of the present year has produced a scarcity of food, and a considerable amount of consequent suffering, in those districts which are not naturally well watered, or which are not supplied artificially with water by means of irrigation works. This is especially the case in certain kórales of Sabaragamuwa, in parts of Uva, and of the Eastern and Northern Provinces, in some of which places it has been found necessary to establish relief works, the cost of which you will find included in the Supplementary Estimates.

The same would a few years ago have been also the condition of the Wanni Hatpattu of the North-Western Province, and large sums would have been spent there in relief works, in themselves of no great permanent value, but undertaken solely to provide labour for a starving population. I will take this district as an example of the lessons which may be learned from the past and present condition of those localities where water is naturally scarce, but where, for the last few years, irrigation has been practised. In 1880 the district in question was visited by an intelligent European officer of the Medical Department. He reported the condition in which he found the people and country. He described the fields as "not having been touched for years in some cases"; as being "as hard and dry and dusty as the roads":—the cattle as dying of hunger and thirst, and depending on the dry leaves falling from the trees for food;—the people as cutting down their cocoanut trees to obtain the cabbage "to appease hunger," and as eating chopped leaves and "mi" fruit, of which the nut is generally used only for expressing oil for lamps.

In the previous year it had been found necessary to expend Rs. 10,056 on relief works in the Wanni and Demala Hatpattus. In 1880 the expenditure on this account was Rs. 9,729. In 1881 it was Rs. 4,881. Since 1884, in which year it amounted to Rs. 893, it has not been necessary to grant anything for relief works.

The restoration of irrigation works in this district commenced in 1878, but had produced no appreciable effect in 1880. They were, however, steadily pursued at an annual expenditure of generally from Rs. 7,000 to Rs. 8,000,* and amounting altogether, from 1878 to 1886, to Rs. 85,624, while earthwork to the value of Rs. 195,583 was performed by the people themselves.

The approximate value of the paddy crops for each year since 1880, when the influence of the irrigation works may be said to have first begun to be felt, was as follows:—

	Rs.		Rs.
1880	95,000	1884	147,340
1881	95,200	1885	223,260
1882	132,140	1886	241,470
1883	112,480		

1880 and 1881 were, it is true, years of famine, but 1882 was an average year for those times, and the value of the crops of 1886 has been nearly double that of the crops of 1882.

The difference between the amount of tithe received in 1882 and in 1886 was Rs. 10,933, which was produced by an expenditure on the part of Government of Rs. 65,997, (the expenditure in 1886 is deducted, as not contributing to the result under consideration,)—a sum which has therefore, financially speaking, been well invested.

How many direct benefits result from the better health and condition of the people, it is needless for me to say. The aspect of the people of the Wanni Hatpattu bears no resemblance to that which it wore in 1880, and yet, had it not been for the water now within their reach, they would, in this year of long unexampled drought, have exhibited an even more pitiable spectacle than they did seven years ago.

By the expenditure of Rs. 65,997 the Crown has gained an additional revenue of over Rs. 10,000, and it has escaped the necessity for expenditure on relief works, amounting in the three years between 1879 and 1882 to Rs. 24,666.

* In 1879 and 1880 Rs. 17,456·89 and Rs. 11,386·38 were spent on irrigation works, in 1882 nothing

I have taken one district as an example, but similar results may be seen elsewhere, and in other localities it may equally be shown that, wholly apart from rates which may be paid for the use of the water, and without considering the expenditure on relief works saved, the improved value of the land in itself pays a handsome return on the outlay. The most remarkable result that I have yet become acquainted with, of this character, also occurred in the North-Western Province. The rents of the fields of a certain tank called Tinipitiyawewa, not in any way specially remarkable for size or importance, averaged for the five years between 1880 and 1885 the sum of Rs. 350. In 1885 the sluices of the tank were partially restored, and the rents for 1887 sold for Rs. 1,500.

None can dispute the benefits conferred on the population by irrigation works, but many are sceptical as to their financial value. That they are so sceptical, is generally due to the fact that their attention is all but exclusively given to the direct returns made to the Treasury; but even were it not the first duty of every Government to promote the health and well-being of the people, it may very easily be demonstrated that, even with regard to purely financial interests, the investment is remunerative, and that a prosperous population is the source of an abundant revenue.

When addressing you last year at the opening of the Session, I called your attention to the prevalence of unpunished, or inadequately punished, crime. I regret that I cannot perceive any improvement in this respect during the last twelve months. Crimes of violence continue to abound, and theft from dwelling-houses has become so common an offence even in the capital as to create a general feeling of insecurity. My attention has been very seriously given to this most unsatisfactory condition of affairs, the causes of which are, I fear, complex, deep-seated, and of long duration. The evil is one with which it will be no easy task to grapple. To assist me in doing so, I desire the co-operation of a strong Commission of Inquiry; but it is a matter of the utmost difficulty to find men competent to undertake such a duty, who have at the same time leisure to devote to it the time and close attention which its efficient discharge requires. In 1886 and the first six months of 1887 140 persons were tried for murder, of whom 29 were sentenced to death. During the last three months there have been no fewer than 28 separate trials for murder, in which 43 persons were accused, of whom 9 were capitally convicted.

I mentioned when addressing you last year, how great an importance I attached to practical effect being given to the Registration of Titles to Lands Ordinances. I, at the same time, recognised the difficulty of so doing. In compliance with the recommendation of a Committee of this Council, to which the consideration of the subject was referred, I am now about, experimentally, to put them in operation in a limited district of the Western Province.

The Thoroughfares Ordinance of 1884 continues in most places to work satisfactorily, as will appear from the following returns. The number of those who paid commutation was:—

In 1886	...	... 370,303
In 1887	...	... 403,137

There was also an increase in 1886 in the number of those who worked, and a corresponding and gratifying decrease in the number of those committed to prison for default, while the number returned as unaccounted for has also materially diminished.

I will not repeat observations of a general character which I have already often addressed to you. I see no reason for discouragement as to the prospects of the Colony. Its progress towards the recovery of its former prosperous condition, though slower than we could desire, is sound and steady.

Both last year, and in 1885, I had occasion, when opening the Session, to deplore the removal by death, since we had last met, of distinguished Members of the Council. This happily is not the case to-day; but while congratulating him as we all do on his well-earned promotion, I cannot but express my deep regret that this Colony is about to lose the valuable services of the Lieutenant-Governor. For the last two years Sir Cecil Smith and I have worked together in perfect harmony and agreement. I have found in his assistance support and strength, which are of incalculable value to a Governor. He has received from me that full confidence which springs from entire reliance on the ability, loyalty, and friendliness of the most important officer of the Government; and it is a satisfaction to me to believe that the beneficial effect of his influence on all branches of the Administration is recognised and appreciated throughout the Colony.

The Session now opened is, in fact, but a continuation of that closed only yesterday. I am myself disposed to doubt whether any great advantage is derived from the existence of regular Sessions formally opened and closed, and whether the system pursued in some other Crown Colonies, under which the sitting of the Legislature is only broken by adjournments, is not an arrangement which better consults public convenience, while it certainly gives the Council a more efficient control over the expenditure of the Colony. That question is, however, emphatically one for the Council itself to consider and determine.

2. His Excellency the Governor having retired, the chair was taken by the Lieutenant-Governor.

Address in reply to His Excellency's Speech.

3. The Attorney-General moved that the following gentlemen be appointed a Sub-Committee to prepare the Address of the Council in reply to His Excellency's Speech:—

The Auditor-General, the Treasurer, the Government Agent Western Province, the Hon. P. Ráma-Náthan, the Hon. H. Bois, and the Hon. R. A. Bosanquet.

Seconded by the Auditor-General. Carried unanimously.

Adjournment of Council.

4. On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday, October 5, at 3 o'clock P.M.

Wednesday, October 5, 1887.

PRESENT:

The Hon. Sir CECIL CLEMENTI SMITH, K.C.M.G., in the Chair.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. G. T. M. O'BRIEN.
The Hon. F. R. SAUNDERS.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RAMA-NATHAN.
The Hon. A. L. DE ALWIS.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.
3. The Council went into Committee.

ADDRESS IN REPLY TO THE GOVERNOR'S SPEECH.

4. The Auditor-General brought up the Draft Address in reply to His Excellency's Speech, prepared by the Sub-Committee of Council, and moved that it be read by the Clerk.

Read accordingly.

The Auditor-General moved the adoption of the Draft Address.

Seconded by the Treasurer. The Address was unanimously adopted.

5. The Clerk of the Council was directed to personally inform the Governor that the Council awaited His Excellency's pleasure. The Council adjourned to await His Excellency's arrival.
6. His Excellency the Governor having arrived, took the Chair.
7. The Lieutenant-Governor read the following Address of the Council in reply to His Excellency's Speech :—

MAY IT PLEASE YOUR EXCELLENCY,

THE Legislative Council thank you for your Address, and acknowledge with feelings of loyalty the pleasure which it gives them to receive the intimation of Her Majesty's approval of the demonstrations which were made throughout the Island in celebration of the Jubilee of Her Majesty's Accession; they venture to hope that the Permanent Memorial, which is to be called "The Victoria Home for Incurables," will be liberally subscribed to in every Province of the Island, and supported by all sections of the community, so that the Institution may be established on a basis worthy of the occasion.

2. The Revenue receipts for the first eight months of the current year, including as they do the results of a very profitable Pearl Fishery, appear to be satisfactory, and justify the expectation of Your Excellency that the Revenue for the year will not fall short of the original estimate.

3. The increasing receipts from the Customs and Railway Departments, coupled with the increased tonnage of vessels entering the Port of Colombo, are strong indications of the improved condition of the Colony and the development of the planting and commercial enterprises.

4. It is with a feeling of satisfaction that the Council receive the statement that the Secretary of State for the Colonies is prepared to reconsider the question of Railway Extension to Haputalé.

They trust that it will be found possible to furnish to Sir Henry Holland further information of a nature calculated to remove all doubts as to the prudence of engaging the Colony in the enterprise in question.

The extension of the Seaside Line southwards, and the undertaking of a line northwards, are works which they trust will receive early attention, provided the financial position of the Colony and the prospects of the proposed lines be found to justify their being undertaken. They suggest that the loan required therefor be offered locally, thus affording a permanent and reliable investment for moneys which at present have to be sent out of the Island.

5. The new Ordinances, as well as the amendments of existing Ordinances, referred to by Your Excellency, will receive the attention and consideration which they merit.

6. Realising the paramount necessity of grappling with the question of Buddhist Temporalities, the Council are prepared to give particular consideration to the measure dealing with that subject.

7. The Council trust, when the laws relating to the distillation and sale of Arrack are again considered, the measures proposed for adoption will have in view, not only the interests of the Revenue, but also the moral welfare of the people.

8. Your Excellency's assurance that the establishment of Central and Provincial Irrigation Boards has insured a more careful consideration of schemes of irrigation and readier despatch of business, is satisfactory.

9. While deploring the failure of the Máligákanda Reservoir, upon which such large sums of money have been already expended, the Council desire to record their appreciation of the work performed by the Members of the Committee which was appointed to inquire into the cause of the disaster, and express a hope that the report will shortly be laid upon the table.

10. The steps now being taken for the protection of Colombo by means of fortifications at Mutwal and Galle Face are in accordance with the Resolution passed by this Council. Seeing that these batteries will be useless until the necessary armament for them has been received, and the guns placed in position, the Council would be pleased to receive some definite assurance from Her Majesty's Government as to when the guns and their equipment may be expected.

11. The construction of a Graving Dock, which would involve the prior construction of a Northern Arm of the Breakwater, would tend materially to increase the importance of the Port of Colombo; and the Council trust that there may be no unnecessary delay in ascertaining the final intentions of the Lords Commissioners of the Admiralty.

12. Your Excellency's intention to appoint a Commission of Inquiry for the purpose of considering means whereby crimes of violence and thefts from dwelling-houses may be more surely prevented and punished, meets with the cordial approval of the Council; and while fully realising the difficulties mentioned by Your Excellency, they yet hope that it may be possible to find among the several communities of the Island gentlemen with special fitness and qualifications willing and able to serve upon the Commission.

13. It is gratifying to the Council to learn that the Ordinance relating to the Registration of Titles to Lands is now for the first time to receive a practical trial, and they trust that the Ordinance may prove so workable as to justify its extension to the whole Island within a few years.

14. The Council desire to join Your Excellency in cordially congratulating the Lieutenant-Governor upon the honour done him by Her Majesty in conferring upon him the important appointment of Governor of the Straits Settlements. Whilst deeply regretting the loss of his valuable services, the Council gladly avail themselves of this opportunity of acknowledging the obligations under which Sir Cecil Smith has placed this Colony, by the unfailing interest he has always taken in measures affecting the moral and material welfare of its inhabitants. The beneficial effect of his influence whilst in the Island, the Council believe, is not only appreciated and acknowledged, but will be for a long time felt and gratefully remembered by all classes and communities throughout Ceylon; and they desire especially to place on record their high sense of the courtesy and ability with which he has invariably conducted the business of the Council.

15. It appears to the Council that the question raised by Your Excellency as to the desirability of the Council sitting in permanent Session is one that must be considered in connection with the existing Rules and Orders, and they recommend that the subject be referred to a Sub-Committee for report.

8. His Excellency the Governor replied as follows:—

HONOURABLE GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I THANK you for your Address, and trust that the Session which has commenced may be marked by the same spirit of goodwill and cordial co-operation which has distinguished our previous Sessions.

PETITION.

9. The Hon. P. Ráma-Náthan presented a Petition from certain inhabitants of certain districts in Eppáwala kóralé of Nuwaragampáláta, in the district of Anurádhapura, complaining of the unequal distribution of rájakáriya, and moved that it be read by the Clerk of the Council.

Petition read and ordered to lie on the table.

PAPERS.

10. The Lieutenant-Governor, by command of His Excellency the Governor, laid on the table the following Papers:—

Sessional Paper I., 1887.—Statement showing the amount of Schedule Fees received by the several Fiscals during the Quarter ended June 30, 1887.

Sessional Paper II., 1887.—Statements showing the Cash Balances of the Colony.

Sessional Paper III., 1887.—Reports by the Superintendent of the Pearl Fishery and the Inspector of the Pearl Banks.

Sessional Paper IV., 1887.—Despatches relating to the proposed Railway Extension to Haputalé.

Ceylon Blue Book for 1886.

NOTICE OF QUESTION.

11. The Hon. P. Ráma-Náthan gave notice of the following question:—

To ask whether the Government have made any inquiry into the operation of the Stamp Ordinance of 1884, as affecting the Courts; and if so, what the result of the inquiry has been.

NOTICE OF MOTION.

12. The Hon. P. Ráma-Náthan gave notice of the following motion:—

To move for a statement showing the revenue derived from judicial stamps used in the Civil Courts anterior to 1884 and subsequent thereto, and the cost of administration of Civil Justice for the same period for which stamp returns have been asked.

13. His Excellency the Governor having retired, the chair was taken by the Lieutenant-Governor.

BILLS.

14. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to remove doubts as to the power of Village Tribunals to issue Parate Execution in certain cases," was read a first time. The second reading was fixed for the next Meeting of Council.

15. On the motion of the Attorney-General, seconded by the Auditor-General, the Bill intituled "An Ordinance to amend the Local Boards of Health and Improvement Ordinance, 1876," was read a first time. The second reading was fixed for the next Meeting of Council.

16. On the motion of the Attorney-General, seconded by the Auditor-General, the Bill intituled "An Ordinance to amend the Road Ordinance, 1861," was read a first time. The second reading was fixed for the next Meeting of Council.

17. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Penal Code," was read a first time. The second reading was fixed for the next Meeting of Council.

18. On the motion of the Attorney-General, seconded by the Auditor-General, the Bill intituled "An Ordinance relating to Treasure Trove," was read a first time. The second reading was fixed for the next Meeting of Council.

19. On the motion of the Attorney-General, seconded by the Auditor-General, the Bill intituled "An Ordinance amending the Toll Ordinance, 1867," was read a first time. The second reading was fixed for the next Meeting of Council.

20. The Lieutenant-Governor, with the permission of the Council, postponed till the next Meeting of Council the first reading of the Bills appearing in his name in the Order of the Day.

NOTICE OF MOTION.

21. The Hon. P. Ráma-Náthan gave notice of the following motion :—

To move, if the Hon. the Surveyor-General has reported on the cost of the survey of a line of Railway to Jaffna, in accordance with the resolution of Council passed last Session, that the said report be laid on the table.

ADJOURNMENT.

22. On the motion of the Lieutenant-Governor, the Council adjourned till Wednesday, October 12, 1887, at 2.30 o'clock P.M.

Wednesday, October 12, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Sir CECIL CLEMENTI SMITH, K.C.M.G.
The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. G. T. M. O'BRIEN.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

NOTICE OF MOTION.

3. The Lieutenant-Governor gave notice that at the next Meeting of Council he would move that a Select Committee be appointed to take into consideration the Rules and Orders of the Council in connection with the proposal to provide for the Council being permanently in Session.

QUESTIONS.

4. The Hon. P. Ráma-Náthan, pursuant to notice, asked whether the Government had made any inquiry into the operation of the Stamp Ordinance of 1884, as affecting the Courts ; and if so, what the result of the inquiry had been.

The Lieutenant-Governor replied.

5. The Hon. P. Ráma-Náthan, pursuant to notice, asked whether the Hon. the Surveyor-General had reported on the cost of the survey of a line of Railway to Jaffna.

The Lieutenant-Governor replied, and by leave of Council read a note on the subject prepared by the Surveyor-General.

BILLS.

6. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to remove doubts as to the power of Village Tribunals to issue Parate Execution in certain cases," was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown for report.

7. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Local Boards of Health and Improvement Ordinance, 1876," was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill as amended in Committee, it was ordered to be referred to the Law Officers of the Crown for report.

8. On the motion of the Attorney-General, seconded by the Hon. R. B. Downall, the Bill intituled "An Ordinance to amend the Road Ordinance, 1861," was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown for report.

9. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Penal Code," was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown for report.

10. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance relating to Treasure Trove," was read a second time, and the Council went into Committee thereon. The Attorney-General moved that the Bill be referred to a Sub-Committee, consisting of the Attorney-General, the Treasurer, the Hon. P. Ráma-Náthan, and the Hon. A. L. De Alwis.

11. By leave of Council, on the motion of the Attorney-General, seconded by the Treasurer, the second reading of the Bill intituled "An Ordinance amending the Toll Ordinance, 1867," was postponed for the next Meeting of Council.

12. On the motion of the Lieutenant-Governor, seconded by the Attorney-General, the Bill intituled "An Ordinance to extend the provisions of Ordinance No. 19 of 1866 to places other than parts of the Sea-coast," was read a first time.

13. On the motion of the Lieutenant-Governor, seconded by the Attorney-General, the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844" (Arrack, Rum, and Toddy), was read a first time.

14. On the motion of the Lieutenant-Governor, seconded by the Attorney-General, the Bill intituled "An Ordinance repealing Ordinance No. 16 of 1886" (Export Duty on Spirits), was read a first time.

15. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance relating to the employment of Guides within Municipalities," was read a first time.

16. On the motion of the Lieutenant-Governor, seconded by the Attorney-General, the next stage of all Bills before the Council was fixed for the next Meeting of Council.

MOTION.

17. The Hon. P. Ráma-Náthan, pursuant to notice, moved for a statement showing the revenue derived from judicial stamps used in the Civil Courts anterior to 1884 and subsequent thereto, and the cost of administration of Civil Justice for the same period for which stamp returns have been asked.

Seconded by the Hon. R. B. Downall.

The Lieutenant-Governor having replied, the Hon. P. Ráma-Náthan, by leave of Council, amended his motion by the insertion of the words "for five years" between the words "civil courts" and "anterior to," and the motion was then agreed to.

PAPERS.

18. The Lieutenant-Governor laid on the table the following papers :—

Sessional Paper V., 1887.—Statement and Account of the Widows' and Orphans' Pension Fund, for the year ended December 31, 1886.

Administration Reports, 1886.—Supplement to Part I., Revenue: Special Reports on the working of the Thoroughfares Ordinance No. 31 of 1884.

Despatch from the Secretary of State, No. 871 of May 30, 1887, *re* Municipal Councils Ordinance No. 7 of 1887.

WITHDRAWAL OF MOTION.

19. The Hon. P. Ráma-Náthan, by leave of Council, withdrew the following motion standing in his name in the Order of the Day :—

"To move that His Excellency the Governor be requested to direct that the report of the Surveyor-General be laid on the table."

ORDER OF BUSINESS.

20. The Hon. P. Ráma-Náthan called attention to the order of business as set out in the Order of the Day.

His Excellency the Governor replied.

ADJOURNMENT.

21. On the motion of the Lieutenant-Governor, the Council adjourned till Wednesday, October 19, 1887, at 2.30 o'clock P.M.

Wednesday, October 19, 1887.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the previous Meeting were read and confirmed.

PAPERS.

3. The Colonial Secretary laid on the table the following Papers :—

Despatch No. 3, of September 24, 1887, conveying to the Legislative Council an expression of Her Majesty's gratitude for the proof of their loyalty to her person and throne, as testified in the Address of Congratulation of the Council on the occasion of the Jubilee.

Sessional Paper VII., 1887.—Reports and Estimates on the proposed Railway to Chilaw.

MOTION.

4. The Colonial Secretary moved that a Select Committee be appointed to take into consideration the Rules and Orders of this Council in connection with the proposal to provide for the Council being permanently in Session.

The Attorney-General seconded.

The Hon. R. A. Bosanquet moved that the debate stand adjourned to the next Meeting of Council. Seconded by the Hon. P. Ráma-Náthan. Motion agreed to.

PETITION.

5. By leave of the Council the Hon. R. A. Bosanquet brought up a petition from the Members of the Kandy Christian Purity Alliance Association and residents of Kandy and its neighbourhood, praying for the repeal of the Contagious Diseases Act in this Colony, and moved that the petition be laid on the table.

Petition ordered to lie on the table.

BILLS.

6. On the motion of the Attorney-General, seconded by the Hon. H. Bois, the Bill intituled "An Ordinance to exempt materials used in making Tea Boxes from duty of Customs" was read a first time.

7. The Clerk of the Council having read the report of the Law Officers of the Crown, dated October 18, that in their opinion there was no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Ordinance, the Attorney-General moved, seconded by the Colonial Secretary, the third reading of the Bill intituled "An Ordinance to remove doubts as to the power of Village Tribunals to issue Parate Execution in certain cases." Carried. Bill read a third time and passed.

8. The Attorney-General moved, seconded by the Colonial Secretary, that the Bill intituled "An Ordinance to amend the Local Boards of Health and Improvement Ordinance, 1876," be re-committed. Carried, and the Bill re-committed. The Attorney-General reported the Bill as amended by the Committee. The Clerk of the Council having read the report of the Law Officers, dated October 18, that in their opinion there was no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Ordinance, the Attorney-General moved, seconded by the Colonial Secretary, the third reading of the Bill. Carried. Bill read a third time and passed.

9. The Clerk of the Council having read the report of the Law Officers, dated October 18, that in their opinion there was no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Ordinance, the Attorney-General moved, seconded by the Colonial Secretary, the third reading of "An Ordinance to amend the Road Ordinance, 1861." Carried. Bill read a third time and passed.

10. The Clerk of the Council having read the report of the Law Officers, dated October 18, that in their opinion there was no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Ordinance, the Attorney-General moved, seconded by the Colonial Secretary, the third reading of "An Ordinance to amend the Penal Code." Carried. Bill read a third time and passed.

11. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance amending the Toll Ordinance, 1867," was read a second time, and the Council went into Committee thereon. The Attorney-General reported the Bill as amended by the Committee. It was ordered to be referred to the Law Officers of the Crown for report.

12. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance to extend the provisions of Ordinance No. 19 of 1866 to places other than parts of the Sea-coast" was read a second time, and the Council went into Committee thereon. The Colonial Secretary having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown for report.

13. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844" was read a second time, and the Council went into Committee thereon. The Colonial Secretary moved that the Bill be referred to a Sub-Committee, consisting of the Attorney-General, the Government Agent Western Province, the Hon. P. Ráma-Náthan, and the Hon. H. Bois. Agreed to.

14. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance repealing Ordinance No. 16 of 1886" was read a second time, and the Council went into Committee thereon. The Colonial Secretary having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown.

15. On the motion of the Attorney-General, seconded by the Auditor-General, the Bill intituled "An Ordinance relating to the employment of Guides within Municipalities" was read a second time, and the Council went into Committee thereon.

Section 7, line 12.—The Hon. H. Bois moved the omission of the words "act as a licensed" and the insertion in their place of the words "ply for hire as a."

Question put that the words "act as a licensed" stand part of the clause. The Council divided :—

Ayes.	*Noes.*
The Hon. A. L. De Alwis.	The Hon. R. A. Bosanquet.
The Hon. P. Ráma-Náthan.	The Hon. H. Bois.
	The Hon. P. D. Anthonisz.
	The Government Agent Central Province.
	The Government Agent Western Province.
	The Auditor-General.
	The Attorney-General.
	The Colonial Secretary.
	The Major-General.

Ayes, 2; Noes, 9; Majority, 7. The words were accordingly omitted, and it was ordered without a division that the words "ply for hire as a" be inserted in their place.

The Attorney-General having reported the Bill as amended, it was ordered to be referred to the Law Officers of the Crown for report.

16. The Colonial Secretary moved, seconded by the Attorney-General, that the next stage of all Bills now before the Council be taken at the next Meeting of Council. Carried.

ADJOURNMENT.

17. On the motion of the Colonial Secretary, the Council adjourned to Friday, October 28, at 2.30 o'clock P.M.

Friday, October 28, 1887.

PRESENT :

His Excellency the Hon. A. H. GORDON, C.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the previous Meeting were read and confirmed.

ASSENT TO BILLS.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to the following Ordinances :—

No. 8 of 1887.—"An Ordinance to remove doubts as to the power of Village Tribunals to issue Parate Execution in certain cases."

No. 10 of 1887.—"An Ordinance to amend the Road Ordinance, 1861."

No. 11 of 1887.—"An Ordinance to amend the Ceylon Penal Code."

PAPERS.

4. The Colonial Secretary laid on the table the following papers :—

Sessional Paper VIII., 1887.—Irrigation Returns : Return to an Order of Council dated December 30, 1886.

Sessional Paper IX., 1887.—Report on the Working of the Fish-curing Scheme between August 1, 1886, and July 31, 1887.

Sessional Paper X., 1887.—Revised Code for Aided Schools, 1888, together with Notification of Amendments.

Administration Reports, 1886, Part IV.—MISCELLANEOUS :—

Report of the Principal Civil Medical Officer and Inspector-General of Hospitals.

MOTIONS.

5. The Government Agent Central Province moved "That a Toll be established on the road from Ambagamuwa to Dikoya, and on the road from Yatiyantota to Dikoya."

Seconded by the Government Agent Western Province. Motion agreed to.

6. On the Council resuming debate on the motion "That a Select Committee be appointed to take into consideration the Rules and Orders of this Council in connection with the proposal to provide for the Council being permanently in Session"—

The Hon. H. Bois moved, seconded by the Hon. P. Ráma-Náthan, that all the words after the words "appointed to" be omitted, and the following words be substituted therefor: "consider whether it is desirable that steps should be taken, and, if so, of what nature, to provide for the more frequent meeting of the Legislative Council throughout the year."

Motion as amended agreed to.

The Colonial Secretary moved, seconded by the Attorney-General, that the Select Committee do consist of the following Members :—

The Major-General.	The Hon. P. Rama-Náthan.
The Colonial Secretary.	The Hon. A. L. De Alwis.
The Attorney-General.	The Hon. R. B. Downall.
The Auditor-General.	The Hon. P. D. Anthonisz, M.D.
	The Hon. H. Bois.
	The Hon. R. A. Bosanquet.

Agreed to.

BILLS.

7. The Attorney-General moved, seconded by the Colonial Secretary, that the Bill intituled "An Ordinance amending the Toll Ordinance, 1867," be re-committed. Agreed to, and the Council went into Committee. The Attorney-General reported the Bill as amended. The Clerk having read the report of the Law Officers, dated October 26, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Bill, the Attorney-General moved, seconded by the Colonial Secretary, that the Bill be read a third time. Carried. Bill read a third time and passed.

8. The Clerk having read the report of the Law Officers, dated October 26, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Bill, the Colonial Secretary moved, seconded by the Attorney-General, the third reading of the Bill intituled "An Ordinance to extend the provisions of Ordinance No. 19 of 1866 to places other than parts of the Sea-coast." Carried. Bill read a third time and passed.

9. The Clerk having read the report of the Law Officers, dated October 26, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, the Colonial Secretary moved, seconded by the Attorney-General, the third reading of the Bill intituled "An Ordinance repealing Ordinance No. 16 of 1886 (Export Duty on Spirits)." Carried. Bill read a third time and passed.

10. The Clerk having read the report of the Law Officers, dated October 26, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Bill, the Attorney-General moved, seconded by the Colonial Secretary, the third reading of the Bill intituled "An Ordinance relating to the employment of Guides within Municipalities." Carried. Bill read a third time and passed.

11. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to exempt materials used in making Tea Boxes from Duty of Customs" was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown for report.

ADJOURNMENT.

12. On the motion of the Colonial Secretary, the Council adjourned to Saturday, October 29, at 1 o'clock P.M.

Saturday, October 29, 1887.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.	The Hon. R. B. DOWNALL.
The Hon. S. GRENIER.	The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. W. D. MOIR.	The Hon. H. BOIS.
The Hon. F. R. SAUNDERS, C.M.G.	The Hon. R. A. BOSANQUET.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.	

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILL.

3. The Colonial Secretary announced the assent of His Excellency the Governor to the Ordinance No. 9 of 1887, intituled "An Ordinance to amend the Local Boards of Health and Improvement Ordinance, 1876."

MESSAGE.

4. The Colonial Secretary brought up and read the following Message from His Excellency the Governor to the Legislative Council :—

THE Governor has directed the Estimates of Revenue and Expenditure for the coming year to be laid before the Legislative Council.

Should the receipts for the last three months of the present year equal those for the same period in 1886, (and His Excellency is unaware of any reason why they should not do so,) the estimated revenue for 1887 will be considerably exceeded. This excess is no doubt due to an unexpected and successful Pearl Fishery, which produced nearly Rs. 400,000; but, even without this adventitious aid, the revenue from ordinary sources would, notwithstanding an extraordinary drought, which very seriously affected the Land Revenue, have fallen little short of the estimated amount.

The receipts from Customs have exceeded the estimate, and more than justify the increase of Rs. 100,000 to their amount which will be found in the Estimates for the year 1888. But a further addition of Rs. 70,000 is anticipated from the abolition of the anomaly, now existing, of permitting the use of the Customs warehouses for three days without payment. This exemption will henceforth be discontinued, and it is proposed that a sum equivalent to the amount derived from the increased receipts due to such discontinuance should be devoted to the augmentation of the funds of the Harbour Board.

The anticipated Customs revenue of 1888 is more than Rs. 700,000 in excess of that received in 1883. Since that year the receipts from this source have annually augmented, and may, it is trusted, be taken as sound evidence of returning prosperity.

The same causes which justify the anticipation of an increased revenue from Customs, even independently of the alteration of warehouse dues, permit an increase to be also made in the estimate of Port and Harbour Dues.

The receipts from Land Sales in 1886 and the first nine months of 1887 have not realised the anticipations which had been formed, and they have been estimated at a lower amount for 1888.

The progressive annual rise in the amount of Land Revenue, on which the Governor last year congratulated the Council, has received a check, owing to the prevalence of unusually severe drought, by which the grain harvests have been most seriously affected. But there is no reason to anticipate the recurrence of a similar calamity in 1888, and the same estimate for next year is accordingly submitted as that for 1887, which, under ordinary circumstances, would unquestionably have been fully realised, and probably exceeded. The Land Revenue of 1886 amounted to Rs. 1,083,000.

An increase of Rs. 160,000 is anticipated under the head of Licenses.

The revenue from Stamps for 1888 is placed at the same amount as that estimated for the present year, an estimate which will, however, be exceeded.

The small anticipated increase in the produce of Taxes is justified by the actual receipts of 1885 and 1886, and by the amount already received during the first nine months of the present year.

Postal receipts are, on what seems good ground, estimated at Rs. 1,000, and those from Fines, Forfeitures, and Fees of Court at Rs. 6,000 more than the amounts inserted in the Supply Bill for the present year.

The receipts of 1886, and for the first nine months of 1887, justify an expectation that the Sale of Government Property will prove more remunerative than was presumed when the Estimates for the current year were framed; while, on the other hand, the item Reimbursements is estimated at Rs. 100,000 less than was the case in 1887.

A slight decrease under the head of Interest is anticipated, and a more serious one under that of Special Receipts. Miscellaneous Receipts are estimated at the same amount as they were for 1887.

Substantially the same vote as for the present year has been asked for the Electric Telegraph. It may be of some interest to mention that the reduction in the rate charged for telegrams has led to a great increase in the number sent, the messages despatched during the first nine months of the present year exceeding by 34 per cent. those of the first nine months of 1886. The receipts for the same period show an increase of 20 per cent.

The Railway Receipts during the present year have shown a marked improvement, and will exceed the estimate. That for 1888—Rs. 3,050,000—may be looked on as a very safe and moderate one.

The present year has been marked by a Pearl Fishery, which produced, within a few rupees, the sum of Rs. 400,000. Another fishery will take place next year, which, as it can be commenced earlier, ought to be larger than that of 1887. But as, of course, the results of the fishery are altogether speculative, it has not been thought prudent to exceed in the estimate the amount actually realised during the present year. If things turn out well, the receipts may prove much greater: if circumstances are unexpectedly adverse, they may be much less.

On the whole, the estimated Revenue of 1888 amounts to Rs. 13,764,150, a very considerable increase over that estimated for 1887. Even deducting the Pearl Fishery, and the amount likely to be gained by the abolition of the privilege of warehousing goods three days without charge, there would be an increase of Rs. 153,220 over the estimated revenue of 1887.

Slow as the annual growth of the revenue may be, it is progressive. The figures stand thus:—

		Rs.			Rs.
1883	...	12,396,577	1886	...	12,682,549
1884	...	12,402,365	1887 (present estimate)		13,384,584
1885	...	12,650,863			

The Estimates of Expenditure for 1888 amount on the whole to Rs. 13,631,083, thus leaving a margin of Rs. 153,066 for unforeseen contingencies. This, considering the more or less speculative character of the Pearl Fishery receipts, is only a prudent precaution.

It is with regret that the Governor has again to ask for an increase in the vote for Establishments of not less than Rs. 45,705. Of that amount, by far the greatest part is due to the necessary provision for increments of salary earned by length of service. Provision has also to be made for paying the salary of the Director of Public Works at the full rate to which by Ordinance he is entitled. On the appointment of the present Director he was told that he was to enter on his duties at a salary of Rs. 12,000, but that on the expiration of two years he would be allowed to draw the full salary of his office, provided his efficiency was favourably reported on by the Colonial Government. Those two years have now elapsed, and in the opinion of His Excellency and his advisers the Director of Public Works has shown no want of ability and energy, and has effected savings which have enabled the Government to undertake the construction of roads, bridges, and other public works of general interest, which it would have otherwise been impossible to commence.

This increment requires no vote, the salary being one on the Fixed Establishment. The case is different with regard to the Surveyor-General, whose salary it is also proposed to increase to the same amount as that at which it formerly stood. Although no distinct promise to that effect was made by the Secretary of State to Lieut.-Colonel Clarke, he was given to understand that after a certain period of service a recommendation by the local Government that he should receive the salary enjoyed by his predecessor would probably receive favourable consideration. As to the efficiency and value of Lieut.-Colonel Clarke's services there cannot, His Excellency believes, exist two opinions in the Colony.

The vote for Pensions, the annual increase of which has on previous occasions been lamented by His Excellency, will receive no augmentation in 1888. On the contrary, the falling in of several pensions will reduce the amount asked for from Rs. 729,218 to Rs. 708,662.

There is also a decrease in the estimate of expenditure under the heads Administration of Justice, Hospitals, Police, and Rent.

Under all other heads, either the Estimate for 1887 is repeated or a larger sum is asked for.

More than Rs. 60,000 of the apparently large increase of Rs. 77,445 in the vote for Revenue Services is due to anticipated expenditure in the prosecution of the Pearl Fishery.

An increase of Rs. 5,560 in the Education Estimates is chiefly caused by the increased number of scholars attaining the prescribed standards, and the consequent increase under the existing Educational Code of the amount of capitation grant due to the schools in which they are found.

The increased vote for Prison Services is only a recognition of charges which have hitherto year after year required a supplementary vote in order to effect their payment.

The increase in the vote for Interest is mainly due to the commencement of payments on account of sinking fund for the redemption of the Waterworks Loan.

The Governor now turns to the Estimates of the Public Works Department. The list of works which it is proposed to undertake is somewhat larger than usual, but those the execution of which is least pressing will be deferred until after the Pearl Fishery; and if the anticipations respecting its profits are not realised, they will not be undertaken at all.

The most considerable single work upon the list is the proposed commencement of an extension of the reclamation of the foreshore of Colombo Harbour. The Governor does not doubt that this undertaking will meet with general approval. Taking the estimates in their order, the only large votes upon the estimate for Works and Buildings are those for the construction of a Telegraph line to Ratnapura, estimated at Rs. 20,897, and for additional Police Quarters at Colombo, estimated at Rs. 20,000. It was understood that if financial considerations permitted, telegraphic communication should be established in 1888 either with Ratnapura or Mátara. On the whole, it has seemed to His Excellency that Ratnapura has the preferable claim. He proposes that the line should at all events be carried to Avisáwélla, where the want of telegraphic communication is much complained of by the inhabitants of that locality, now rapidly growing in importance as a planting district. Its further extension to Ratnapura should depend on the degree of success attending the prosecution of the Pearl Fishery.

The urgent need for increased barrack accommodation for the Police at Colombo has long been felt, and there can be no question that discipline and efficiency are seriously impaired by the conditions under which they are at present housed; but, though a vote has been asked, the Governor is not at present in a position to submit any detailed proposal as to the accommodation to be provided, and it must therefore be regarded rather as the sanction of a principle, than as the estimate for a given work.

Of the smaller buildings contemplated, and which are but a scanty selection from a list of many urgently called for, it is unnecessary to say much: each will be explained in detail in the Sub-Committee.

It may, however, be as well briefly to notice two. The officers of the Survey Department at Anurádhapura have no fixed place of abode, and have either to inhabit the resthouse, or avail themselves of the hospitality of friends. It is difficult for their duty to be satisfactorily performed in these circumstances, and pending the erection of a suitable bungalow it has been thought advisable to construct one of a temporary character. The other item which requires notice is the grant towards the building of an Industrial School near Bandárawela, (erroneously described as "for Uva," there being, His Excellency believes, no intention to confine its benefits to the province in which it happens to be situated.) The gratitude of the Colony is due to the Rev. S. Langdon, for the philanthropic spirit and energy he has displayed in planning this institution. The Government has agreed to bear half the cost of the buildings, and to grant Mr. Langdon the free use of a certain amount of land. His Excellency entertains no doubt that the Council will willingly ratify the compact.

It is proposed to continue the prosecution of the Nambapána road. The vote for 1888 will suffice to complete all the bridges on the line, leaving Rs. 28,910, necessary for the full completion of the road itself, to be provided in the Estimates of 1889. Meanwhile, the erection of the bridges will at once render the road to a considerable extent available for traffic. To the opening of direct communication between Ratnapura and the Southern Province His Excellency is inclined to attach some importance, and Rs. 15,000 is asked for the extension of the Morowak kóralé road towards Rakwána. The extension of the Karaitivu-Veriaḍḍi road, for which the like sum is asked, is a work strongly recommended by the Acting Government Agent of the Eastern Province.

Votes are asked for several roads in the Central Province, to be constructed on the grant-in-aid principle. Of these, the most important is the extension of the Bogawantaláwa cart road, the Government moiety of the cost of which will amount to Rs. 28,957.

The votes for additions and improvements to roads, though numerous, are for the most part small, and need no detailed explanation here. They may be better discussed in Sub-Committee. It is proposed steadily to pursue the policy of replacing wooden bridges and culverts by iron ones on the principal roads of the Colony. Something in this direction has been done during each of the last four years on the Ratnapura road, and with the most satisfactory results.

The vote for metalling the great North road is of smaller amount than usual, a considerable amount of this year's vote being still available, which it is proposed to carry forward as an unexpended balance.

A sum of Rs. 15,000 is asked for a bridge over the Riṭigaha-oya.

As two large and costly bridges are in the course of construction in the immediate vicinity of the Riṭigaha-oya, it may be thought that the district in which they are situated has received a disproportionate share of attention. This, however, is not the case; and there are good grounds for believing that this bridge will be of great benefit to estates and villages which derive no advantage from those over the Situwaka and Kelani rivers.

An unfortunate accident to the Situwaka bridge, when on the point of completion, has retarded the opening of that work, and rendered its construction more costly than had been originally anticipated.

The successful working of the Thoroughfares Ordinance, and the greater amount of days' labour or of commutation money in redemption of days' labour, now obtained under its provisions, has made it possible very largely to reduce the amount of Government money payable towards the maintenance

of roads. It is possible that for some districts the amount which should be allowed on account of deficiencies has been under-estimated, but in the main the Governor is satisfied that the principle of these reductions, the idea of which was initiated and energetically enforced by Sir Cecil Smith, is in the main correct.

In connection with the maintenance of roads, the Governor is glad to take occasion to repeat the expression of his confidence in the merits of the system of road upkeep introduced three years ago. That confidence is only strengthened by observation of its results, whether from the point of view of economy or that of efficiency. His Excellency has during the present year travelled over a large part of the principal roads in every province of the Island. He has of course found here and there,—as who would not, in any country, or under any system?—some roads out of repair and some insufficiently attended to. But, on the whole, the condition of roads in Ceylon very far exceeds that of the roads in any other Colony similarly situated, and His Excellency is abundantly satisfied none can surpass those on which what is called the new system of maintenance is thoroughly and efficiently carried out. Its weak point, as His Excellency has before remarked, is that its success is greatly dependent on intelligent supervision, and this has in some cases been wanting; but it may be hoped that as indolent, inefficient, or insubordinate officers disappear from employment, complaints as to the condition of the principal roads will become more infrequent. They have indeed already become so, and not a fault is now found with many of those roads, the condition of which, though not due to the cause popularly assigned for it, was really some time since such as to excite not unnatural dissatisfaction.

It is proposed to continue the Walawe-gaṅga irrigation works. These will probably be among the most successful and remunerative in the Island. The head works are now nearly complete, and the distributing channels have been cut for some distance; but it is unnecessary to observe that it is upon the extent and capacity of these channels that the value of the work depends, and it is to their extension that the votes of the present year will be devoted. The only other irrigation works of any magnitude which it is proposed to undertake next year, are the restoration of the Kaliodai anicut, which, owing to defective workmanship under inefficient supervision, has wholly collapsed, and which the Government cannot but replace; and the restoration of the Veragoḍa tank in the Eastern Province. Of this tank the Acting Government Agent writes that it is intended as an auxiliary tank to Chaḍayantaláwa, the storage capacity of which has proved insufficient, and an enormous wastage of water from which accordingly takes place without benefit to the lands assessed for its construction. The proposed restoration is said to present no engineering difficulties whatever, and will benefit between two and three thousand acres of land. The Central Irrigation Board has, therefore, after careful consideration, recommended the Government to propose a vote for this work to the Legislative Council.

The sum of Rs. 200,000 which has hitherto appeared for minor irrigation works, will no longer be found in this part of the Estimates. These works are now provided for under the Ordinance passed in the early part of the present year, and the probable approximate amount which will under that Ordinance be due to the Irrigation Fund will be found as a payment to the Fund by the Colonial Treasurer under the head "Miscellaneous Services." Some little difficulty has been experienced in adjusting the commencement of payments under the new system, but His Excellency believes that by the method now suggested it may be satisfactorily met and overcome.

A vote of Rs. 14,000 is asked for the improvement of the Puttalam canal. As there is certainly no immediate prospect of railway extension in this direction, it is absolutely necessary to do something to improve the condition of this waterway, so important as regards the transport of salt. At the same time, the Governor thinks it but right to record his own opinion,—which he trusts may be a mistaken one,—that no moderate expenditure will ever make this canal a commodious or easy channel for navigation, or one by which expeditious transport can be possible; while if really large sums are to be lavished on facilitating transport between the North-Western Province and Colombo, there can be no doubt of the superior advantages which would attend the construction of a railway.

The Members of the Council will no doubt observe that throughout the estimate of expenditure on Works and Buildings, in addition to the items the aggregate amount of which forms the sum total of each separate vote, certain additional items in brackets are inserted. These are works which, although in His Excellency's opinion the expenditure asked for under the different sub-heads ought not to be materially exceeded, he would nevertheless gladly see undertaken, and some of which it is possible that the Council may consider should be so in preference to some of those included in the substantive estimate presented. Should this be the case, the Governor will not be disinclined to reconsider his own selection.

For example, the unhealthiness and unfitness of the position of the hospital at Anurádhapura has been long recognised, the need of transferring it to a better site has been repeatedly admitted, and the inclusion of an estimate for a new one in the works of the ensuing year has been more than once promised. It may be that the Council will consider the vote for Police Quarters one which, in its present vague form, they are hardly justified in adopting, and if so they may consider the amount of the vote available for the hospital in question.

The second item in brackets is one which the Governor does not wish to see adopted unless the Council is convinced that it may be so without detriment to other interests. The work suggested is one which would add to the convenience and comfort of Queen's House, but it cannot be described as really necessary, and His Excellency has no wish to press for its adoption if the amount is urgently required for other services.

The Onḍachchimaḍam causeway and the Vavuniya-Viláṅkulam Horowupotána road may perhaps appear to the Sub-Committee more deserving of execution than some other works already on the list; and one work not mentioned there,—the gravelling of the road from Mútúr to Tóppur in the Trincomalee district,—has also real claims to attention.

For the restoration of the Punalai causeway a very strong case may be made out. It is not creditable to a Government that a work, the necessity for which it has admitted by once executing it, should, when accidentally destroyed, be permitted to remain a heap of ruins; and although the Governor has on the whole accorded the preference to the re-building of Toppu bridge, (which stands in much the same category,) and to the opening of the Kompas-pára road, (which does not,) and the sums appropriated to which equal, when put together, the estimated cost of the repair of the Punalai causeway, he is far from being confident that the latter work has not at least equal claims to attention. Should the Sub-Committee consider them not only equal, but superior, and be inclined to recommend the

substitution of this work for the others named, His Excellency would willingly defer to their recommendation.

The estimate, also in brackets, for the conversion of Castlereagh bridge into one practicable for the passage of carts, labours under the same defect as that for Police accommodation, no accurate estimate having yet been prepared of its probable cost.

It is the duty of the Governor to call special attention to the increase in the amount asked for Military Expenditure, owing to the vote of Rs. 195,000 asked for towards the Fortification of Colombo. The works on the site of Cline Lodge are already commenced, and His Excellency has reason to believe that those on Galle Face will also shortly be begun.

The Council will no doubt at once remark the vote of Rs. 90,000 for interest on the loan authorised by the Ordinance No. 2 of 1886, for the extension of the railway to Haputalé and to Bentota, under the head of Railway Services. There can be no reasonable question that if the doubts stated by the Secretary of State for the Colonies as to the ability of the Colony to bear the burden of the loan, and the amount of traffic likely to be secured to the Railway, can be satisfactorily met, the Ordinance in question will be submitted to Her Majesty for confirmation; and by at once placing on the Estimates a vote for the amount of interest and contribution to sinking fund, likely to be required during the first year of the currency of the loan, this Council will afford evidence both of its disposition and ability to meet the obligation to which the Secretary of State refers.

The Governor is anxious that there should be no misapprehension as to the probable consequences of a failure to satisfy Her Majesty's Government on the points in question. It appears to be considered by some that although such failure might prevent the extension of the present line on the existing gauge, it would offer no obstacle to the almost immediate sanction by Her Majesty's Government of another line upon a new trace and of a different gauge.

Such anticipations are, His Excellency believes, destitute of reasonable foundation. The extension already contemplated may be abandoned for a time, but it is highly improbable that any other scheme which may be proposed will receive the sanction which has been denied to it. In connection with this subject, it may not be without interest to observe that the working expenses of the whole line, which in 1885 amounted to fifty-six per cent. of the earnings, only amounted to fifty-three per cent. in 1886, and according to present appearances will not this year exceed fifty per cent.

Under this head of Railway Services you will be asked to sanction, along with several minor works, the construction of a new erecting shop at Colombo. The existing building is inadequate in size and in a bad state of repair, and the Governor is sanguine that the cost of erection will very speedily repay itself in the results of better work conducted under better auspices.

The Governor now leaves the Estimates for 1888 to the careful scrutiny of the Council. It is unnecessary, after past experience, that he should again give expression to the confidence which he has reason to entertain, that it is a scrutiny which will be conducted with close attention, but in no unfriendly or ungenerous spirit.

5. The Colonial Secretary laid on the table the Estimates of Revenue and Expenditure of the Government of Ceylon for 1888.

6. The Colonial Secretary gave notice that he would at the next Meeting of Council move the first reading of the Supply Bill, 1888, and take up the next stage of all Bills before Council.

ADJOURNMENT.

7. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, November 2, at 2.30 o'clock P.M.

Wednesday, November 2, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

MEMBER SWORN.

3. The Hon. A. Bailey, Acting Treasurer, took the oath and his seat as a Member of the Council.

ASSENT TO BILLS.

4. The Colonial Secretary announced that His Excellency the Governor had given his assent to the following Ordinances:—

No. 12 of 1887.—"An Ordinance amending the Toll Ordinance, 1867."

No. 13 of 1887.—"An Ordinance to extend the provisions of Ordinance No. 19 of 1866 to places other than parts of the Sea-coast."

No. 14 of 1887.—"An Ordinance repealing Ordinance No. 16 of 1886 (Export Duty on Spirits)."

No. 15 of 1887.—"An Ordinance relating to the employment of Guides within Municipalities."

PETITIONS.

5. The Hon. P. D. Anthonisz presented a Petition from the residents and landed proprietors of the districts of Galle and Mátara on the subject of the extension of the Kalutara Railway line to Galle and Mátara, and moved that it be read by the Clerk of the Council.

Read accordingly.

6. The Hon. P. Ráma-Náthan presented a Petition from the inhabitants of Káraittívu, Jaffna, praying for the re-construction of the Punnalai causeway.

Petition ordered to lie on the table.

NOTICE OF MOTION.

7. The Hon. P. D. Anthonisz gave notice that he would at the next Meeting of Council move "That the Council do go into Committee to consider the Petition from the inhabitants of Galle and Mátara praying for the extension of the Railway to the South."

In Committee (should the above motion be carried), that he would move the following Resolution :—

"That it is desirable that the extension to Bentota be proceeded with at once."

NOTICE OF QUESTION.

8. The Hon. R. A. Bosanquet gave notice that he would at the next Meeting of Council inquire "Whether the labour performed by the patients in the Colombo Lunatic Asylum, who are employed in agricultural pursuits, is intra-mural or extra-mural."

NOTICE OF MOTIONS.

9. The Hon. R. A. Bosanquet gave notice that he would at the next Meeting of Council move for a Return showing :—

(1) The number of Patients in the Colombo Lunatic Asylums employed during the year 1886 (*a*) in Agricultural Pursuits, (*b*) in Gardening.

(2) The gross amount realised by sale of the produce raised by such labour.

Also for a Return showing :—

(1) The number of Prisoners employed in the Convict Establishment at Welikada during 1886 (*a*) in beating Coir Fibre, (*b*) in manufacturing Coir Produce.

(2) The Cost of the raw material supplied to these Prisoners, and the details of all sums brought to credit for such produce.

(3) The Jails in Ceylon (omitting the Convict Establishments in Colombo and Kandy), with the number of times each has been visited by the Inspector-General of Prisons from the date of his appointment up to June 30, 1887.

10. The Hon. R. A. Bosanquet gave notice that he would at the next Meeting of Council move :—

"That, with the view to the more economical and efficient working of the Prisons in the Colony, it is desirable to discontinue the combined appointment of Inspector-General of Police and Inspector-General of Prisons.

BILLS.

11. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888" was read a first time.

12. The Clerk of the Council having read the report of the Law Officers of the Crown, stating that in their opinion there was no impediment to the execution by the Colonial Tribunals of a law in terms of the said Ordinance, the Bill intituled "An Ordinance to exempt materials used in making Tea Boxes from Duty of Customs" was, on the motion of the Attorney-General, seconded by the Colonial Secretary, read a third time and passed.

13. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Council went into Committee. The Attorney-General brought up the report of the Sub-Committee appointed to consider the Bill intituled "An Ordinance relating to Treasure Trove," and moved that it be read by the Clerk of the Council. Read accordingly. The Attorney-General having reported the Bill as amended to the Council, it was, on his motion, seconded by the Colonial Secretary, ordered to be referred to the Law Officers of the Crown for report.

14. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Council went into Committee. The Attorney-General brought up the report of the Sub-Committee on the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)," and moved that it be read by the Clerk of the Council. Read accordingly.

On the motion of the Hon. P. Ráma-Náthan the further consideration of the Bill was postponed for two weeks.

15. On the motion of the Colonial Secretary, seconded by the Attorney-General, the next stage of all Bills before the Council, with the exception of the Ordinance to amend Ordinance No. 10 of 1844, was fixed for the next meeting of Council.

ADJOURNMENT.

16. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, November 9, at 2.30 o'clock P.M.

Tuesday, November 8, 1887.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILL.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 16 of 1887, intituled "An Ordinance to exempt materials used in making Tea Boxes from Duty of Customs."

PAPER.

4. The Colonial Secretary laid on the table Despatch from the Secretary of State No. 317, of October 3, intimating that Her Majesty has read with much interest the account given of the manner in which the Jubilee of her Accession to the Throne was celebrated in Ceylon, and conveying an expression of Her Majesty's appreciation of the loyalty and attachment to the Crown which was so cordially exhibited on the occasion by all classes and races of Her Majesty's subjects in Ceylon.

PETITIONS.

5. The Hon. A. L. De Alwis presented a Petition from the inhabitants of Bentota-Walalláwiti kóralé, praying that the jurisdiction of the District Court of Kalutara may be extended so as to include the Bentota-Walalláwiti kóralé, and moved that it be read by the Clerk of the Council. Read accordingly, and Petition ordered to lie on the table.

6. The Hon. P. Ráma-Náthan presented a Petition from certain inhabitants of Jaffna, praying that the records of the Chávakachchéri Court may be transferred back from the Point Pedro Court, and the former court be opened for a fortnight every month. Petition ordered to lie on the table.

7. The Hon. P. Ráma-Náthan presented a Petition from the inhabitants of Pitigal kóralé south, in the Chilaw district, complaining of the re-arrangement (which was given effect to by Proclamation of June 10, 1880) of the jurisdictions of the Negombo and Chilaw Courts, and praying that the original jurisdictions be reverted to. Petition ordered to lie on the table.

QUESTION.

8. The Hon. R. A. Bosanquet inquired whether the labour performed by the patients in the Colombo Lunatic Asylums who are employed in agricultural pursuits was intra-mural or extra-mural.

The Colonial Secretary replied.

MOTIONS.

9. The Hon. P. D. Anthonisz moved that the Council do go into Committee to consider the Petition from the inhabitants of Galle and Mátara praying for extension of the Railway to the south.

Seconded by the Hon. A. L. De Alwis. Agreed to.

10. In Committee, the Hon. P. D. Anthonisz moved that it is desirable that the extension to Bentota be proceeded with at once.

Motion by leave of the Council withdrawn.

11. The Hon. R. A. Bosanquet moved for a return showing—

(1) The number of Patients in the Colombo Lunatic Asylums employed during the year 1886, (*a*) in Agricultural Pursuits, (*b*) in Gardening.

(2) The gross amount realised by sale of the produce raised by such labour.

And for a return showing—

(1) The number of Prisoners employed in the Convict Establishment at Welikada during 1886, (*a*) in beating Coir Fibre, (*b*) in manufacturing Coir Produce.

(2) The Cost of the raw material supplied to these Prisoners, and the details of all sums brought to credit for such produce.

(3) The Jails in Ceylon (omitting the Convict Establishments in Colombo and Kandy), with the number of times each has been visited by the Inspector-General of Prisons from the date of his appointment up to June 30, 1887.

The Hon. P. Ráma-Náthan seconded.

The Colonial Secretary replied, and laid on the table the returns asked for.

12. The Hon. R. A. Bosanquet by leave of the Council postponed making the following motion appearing in his name in the Order of the Day :—

"To move that, with the view to the more economical and efficient working of the Prisons in the Colony, it is desirable to discontinue the combined appointment of Inspector-General of Police and Inspector-General of Prisons."

BILLS.

13. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance relating to Treasure Trove" was re-committed. The Attorney-General having reported the Bill as amended, and the Clerk of the Council having read the report thereon of the Law Officers of the Crown, dated November 7, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the proposed Bill, on the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill was read a third time and passed.

14. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888" was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Auditor-General, the Treasurer, the Hon. P. Ráma-Náthan, the Hon. R. B. Downall, and the Hon. H. Bois.

ADJOURNMENT.

15. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, November 16, at 2.30 o'clock P.M.

Wednesday, November 16, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILLS.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 17 of 1887, intituled "An Ordinance relating to Treasure Trove."

PAPERS.

4. The Colonial Secretary laid on the table the following Papers :—

Sessional Paper XIII., 1887.—Statement of the Revenue and Expenditure of the several Provincial Road Committees during 1886.

Sessional Paper XIV., 1887.—Report on the Celebration of Her Majesty's Jubilee in Ceylon.

Sessional Paper XV., 1887.—Village Tribunals: Statement showing the Districts, Presidents, their Salaries and Staffs, and the Number and Nature of Cases Disposed of during 1886.

Sessional Paper XVI., 1887.—Report of the Committee appointed to inquire into and report upon the serious failure of the Máligákanda Reservoir.

PETITION.

5. The Hon. P. D. Anthonisz presented a Petition from the Unofficial Members of the Provincial Road Committee and District Road Committee and other inhabitants of Galle, praying that the Legislative Council do withhold their sanction from the apportionment for the principal roads appearing in the draft Supply Bill, and moved that it be read by the Clerk of the Council.

Read accordingly, and Petition ordered to lie on the table.

MOTIONS.

6. On the motion of the Hon. P. Ráma-Náthan, seconded by the Hon. H. Bois, the Council went into Committee to consider the Petition from the inhabitants of the Northern Province praying for the extension of the Railway to Jaffna.

In Committee, the Hon. P. Ráma-Náthan moved that a Select Committee be appointed to consider, take evidence, and report upon the goods and passenger traffic which a line of Railway running either from Mátalé to Jaffna, or from Polgahawela *viâ* Kurunégala to Dambulla and thence along the main artery of trade to Jaffna, or from Henaratgoḍa *viâ* Chilaw northwards to Jaffna, may command.

Seconded by the Hon. H. Bois, and agreed to.

On the motion of the Colonial Secretary the following gentlemen were appointed a Select Committee :—The Treasurer, the Surveyor-General, the Hon. P. Ráma-Náthan, and the Hon. R. A. Bosanquet.

7. The Government Agent Western Province moved, seconded by the Government Agent Central Province, that a Ferry Toll be established over Gurugoḍa-oya, at Ruanwella. Agreed to.

BILLS.

8. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Criminal Procedure Code, 1883," was read a first time.

9. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance making special provision for the Administration of Justice in the North-Western Province" was read a first time.

10. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance to continue Ordinances Nos. 9 and 10 of 1886" was read a first time.

11. The Council in Committee resumed consideration of the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)." The Attorney-General having reported the Bill as amended in Committee, it was, on the motion of the Attorney-General, seconded by the Colonial Secretary, ordered to be referred to the Law Officers of the Crown for report.

ADJOURNMENT.

12. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, November 23, at 2.30 o'clock P.M.

Wednesday, November 23, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.
The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. H. BOIS.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the previous Meeting were read and confirmed.

NOTICE OF MOTION.

3. The Hon. P. D. Anthonisz gave notice that he would at the next Meeting of Council move for a Return showing, with respect to the epidemic outbreaks of Cholera and Small-pox which have appeared in the Island between 1876 and 1886—

(1) How long each epidemic outbreak lasted.

(2) How many persons were attacked, and how many died, in each outbreak.

BILLS.

4. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance relating to the cultivation of land for a share of the produce thereof" was read a first time.

5. On the motion of the Hon. A. L. De Alwis, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)" was recommitted. The Colonial Secretary having reported the Bill as amended, and the Clerk of the Council having read the report of the Law Officers of the Crown, dated November 22, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the said draft, on the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill was read a third time and passed.

6. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Criminal Procedure Code, 1883," was read a second time, and the Council went into Committee thereon. On the motion of the Attorney-General the Bill was referred to a Sub-Committee consisting of the Colonial Secretary, the Attorney-General, the Government Agent Western Province, the Hon. P. Ráma-Náthan, the Hon. A. L. De Alwis, and the Hon. R. A. Bosanquet.

7. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance making special provision for the Administration of Justice in the North-Western Province" was read a second time, and the Council went into Committee thereon. The Colonial Secretary having reported the Bill as amended, it was ordered to be referred to the Law Officers of the Crown for report. On the motion of the Colonial Secretary, seconded by the Hon. P. Ráma-Náthan, it was ordered that the Standing Rules relative to the reading and commitment of Bills be suspended. The Clerk of the Council having read the report of the Law Officers of the Crown, dated November 23, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the said draft, on the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill was read a third time and passed.

8. The Colonial Secretary moved, seconded by the Attorney-General, that the Bill intituled "An Ordinance to continue Ordinances Nos. 9 and 10 of 1886" be read a second time.

On the question being put that this Bill be read a second time, the Council divided, with the following result :—

Ayes.	*Noes.*
The Hon. R. A. Bosanquet.	The Hon. H. Bois.
The Hon. P. D. Anthonisz.	The Hon. R. B. Downall.
The Surveyor-General.	The Hon. A. L. De Alwis.
The Government Agent Central Province.	The Hon. P. Ráma-Náthan.
The Government Agent Western Province.	
The Treasurer.	
The Auditor-General.	
The Attorney-General.	
The Colonial Secretary.	
The Major-General.	

Ayes, 10; Noes, 4; Majority, 6.—Carried; and the Bill was accordingly read a second time and the Council went into Committee thereon. The Colonial Secretary having reported the Bill unamended, it was, on the motion of the Colonial Secretary, seconded by the Attorney-General, ordered to be referred to the Law Officers of the Crown for report.

ASSENT TO BILL.

9. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 18 of 1887, intituled "An Ordinance making special provision for the Administration of Justice in the North-Western Province."

ADJOURNMENT.

10. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, November 30, at 2.30 o'clock P.M.

Wednesday, November 30, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. O. LENNOX, C.B., V.C.	The Hon. W. E. T. SHARPE.
The Hon. G. T. M. O'BRIEN.	The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. S. GRENIER.	The Hon. P. RÁMA-NÁTHAN.
The Hon. R. W. D. MOIR.	The Hon. R. B. DOWNALL.
The Hon. J. B. A. BAILEY.	The Hon. P. D. ANTHONISZ, M.D.
The Hon. F. R. SAUNDERS, C.M.G.	The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILL.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 19 of 1887, intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)."

PAPERS.

4. The Colonial Secretary laid on the table the following Papers :—

Administration Reports, 1886, Part I.—REVENUE :—

Return of the Revenue and Expenditure of the several Government Agents and their Assistants during 1886.

Administration Reports, 1886, Part IV.—MISCELLANEOUS :—

Report on the Government Printing Office.

Sessional Paper XVII., 1887.—Report of a Committee appointed to inquire into and report upon the cost and style of victualling Prisoners in the Ceylon Jails, and the equipment and management of Jails generally.

MOTIONS.

5. The Hon. P. D. Anthonisz, pursuant to notice, moved for a Return showing, with respect to the epidemic outbreaks of Cholera and Small-pox which have appeared in the Island between 1876 and 1886—

(1) How long each epidemic outbreak lasted.

(2) How many persons were attacked and how many died in each outbreak.

Seconded by the Government Agent Central Province.

The Colonial Secretary laid on the table the returns called for.

6. **The Hon. P. Ráma-Náthan, pursuant to notice, moved that a Select Committee be appointed to consider and report upon the proposal to remove the exemption from rent now allowed on goods for the first three days of their remaining in Government Warehouses.**

Seconded by the Hon. P. D. Anthonisz.

On the question being put that a Select Committee be appointed to consider and report upon the proposal to remove the exemption from rent now allowed on goods for the first three days of their remaining in Government Warehouses, the Council divided, with the following result :—

Ayes.	*Noes.*
The Hon. P. D. Anthonisz.	The Hon. R. A. Bosanquet.
The Hon. P. Ráma-Náthan.	The Hon. R. B. Downall.
	The Surveyor-General.
	The Government Agent Central Province.
	The Government Agent Western Province.
	The Treasurer.
	The Auditor-General.
	The Attorney-General.
	The Colonial Secretary.
	The Major-General.

Ayes, 2 ; Noes, 10 ; Majority, 8.—The motion was accordingly lost.

BILL.

7. The Clerk of the Council having read the report of the Law Officers of the Crown, dated November 28, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the said draft, on the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance to continue Ordinances Nos. 9 and 10 of 1886" was read a third time and passed.

ADJOURNMENT.

8. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, December 7, at 2.30 o'clock P.M.

Wednesday, December 7, 1887.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.	The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. S. GRENIER.	The Hon. P. RÁMA-NÁTHAN.
The Hon. R. W. D. MOIR.	The Hon. A. L. DE ALWIS.
The Hon. J. B. A. BAILEY.	The Hon. R. B. DOWNALL.
The Hon. F. R. SAUNDERS, C.M.G.	The Hon. P. D. ANTHONISZ, M.D.
The Hon. W. E. T. SHARPE.	The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILL.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 20 of 1887, intituled "An Ordinance to continue Ordinances Nos. 9 and 10 of 1886."

BILLS.

4. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance relating to the cultivation of land for a share of the produce thereof" was read a second time, and the Council went into Committee thereon. The Attorney-General having reported the Bill as amended in Committee, it was, on the motion of the Attorney-General, seconded by the Colonial Secretary, ordered to be referred to the Law Officers of the Crown for report.

5. In Committee on the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888," the Colonial Secretary brought up the report of the Sub-Committee appointed to report thereon, and moved that it be taken as read. Agreed to.

The Colonial Secretary reported progress, and the further consideration of the Bill in Committee was postponed to Thursday, December 8, 1887, at 2 o'clock P.M.

Thursday, December 8, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

BILLS.

3. The Council in Committee resumed consideration of the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888."

On the item No. 23, Railway Services: Crown Agents, R90,000—the Colonial Secretary moved that the vote be adopted. On the question being put that the vote stand part of the Schedule, the Council divided, with the following result:—

Ayes.	*Noes.*
The Hon. R. A. Bosanquet.	The Hon. P. Ráma-Náthan.
The Hon. P. D. Anthonisz, M.D.	
The Hon. R. B. Downall.	
The Surveyor-General.	
The Government Agent Central Province.	
The Government Agent Western Province.	
The Treasurer.	
The Auditor-General.	
The Attorney-General.	
The Colonial Secretary.	

Ayes, 10; Noes, 1; Majority, 9.—Carried.

The Schedule A having been read, the Colonial Secretary reported progress, and on his motion the Council adjourned to Wednesday, December 14, at 2.30 o'clock P.M.

Wednesday, December 14, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.
The Hon. W. W. MITCHELL.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the previous Meeting were read and confirmed.

MEMBER SWORN.

3. The Hon. W. W. Mitchell took the usual oath as a Member of the Council.

BILLS.

4. On the motion of the Treasurer, seconded by the Auditor-General, the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887" was read a first time.

The Colonial Secretary moved the suspension of the Standing Orders with regard to the reading and commitment of Bills. Seconded by the Auditor-General. Agreed to.

On the motion of the Treasurer, seconded by the Auditor-General, the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887" was read a second time, and the Council went into Committee thereon.

On the motion of the Treasurer the Bill was referred to a Sub-Committee, consisting of the Auditor-General, the Treasurer, the Hon. P. Ráma-Náthan, and the Hon. R. A. Bosanquet.

5. On the motion of the Auditor-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to make final provision for the Supplementary Contingent Charges for the year 1886" was read a first time.

The Colonial Secretary moved the suspension of the Standing Orders with regard to the reading and commitment of Bills. Seconded by the Attorney-General. Agreed to.

On the motion of the Auditor-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to make final provision for the Supplementary Contingent Charges for the year 1886" was read a second time, and the Council went into Committee thereon.

On the motion of the Auditor-General the Bill was referred to a Sub-Committee, consisting of the Auditor-General, the Treasurer, the Hon. P. Ráma-Náthan, and the Hon. R. A. Bosanquet.

6. The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the draft, on the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance relating to the cultivation of land for a share of the produce thereof" was read a third time and passed.

7. The Council in Committee having resumed consideration of the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888," the Colonial Secretary moved that the necessary alterations to make the abstract agree with the Schedule A as amended be made. Agreed to.

The Colonial Secretary having reported the Bill as amended, it was, on the motion of the Colonial Secretary, seconded by the Attorney-General, ordered to be referred to the Law Officers of the Crown for report.

The Hon. P. Ráma-Náthan handed to the Clerk the following Protest to be entered on the Minutes :—

IT is my duty to protest against the passing of the vote of Rs. 90,000 in payment of interest for the loan intended to be raised for the construction of the Railway to Haputalé.

1. In my address to the Council I have entered into a careful examination of the estimates of revenue prepared by the Colonial Secretary, and have, I humbly believe, succeeded in showing that the total of Rs. 13,764,000 found by him could not be safely calculated upon, and that in all likelihood, if the expenditure as sanctioned by the Council were laid out, there would be a deficit of about Rs. 400,000. It is also noteworthy that public works of crying necessity have been postponed year after year for want of revenue. Not to speak of the neglected state of some of our principal thoroughfares, such as, for instance, the road leading from the Province of Uva into the Eastern Province, the road leading from Colombo to Kóṭṭé, the road from Colombo to Negombo, &c., we have, for instance, on the highway from Colombo to Chilaw a bridge spanning the river Maha-oya at Tóppu (six miles from Negombo) allowed to remain in ruins during the last two years, to the immense inconvenience of a large and busy population, the poorer classes of whom feel it a great burden to pay a charge for the ferry now plying, under orders from the Government, between the banks of that river. I need not dwell upon other necessary public works, the undertaking of which is beyond our resources ; for, in His Excellency the Governor's Message of 1886 to the Legislative Council, it is observed : "*But a very small portion* of the public works which the Governor would desire to see executed, *which are greatly needed*, and which, if executed, would confer lasting benefits on the districts interested, has now been commended to your notice. * * * His Excellency must repeat what he observed two years ago, that many necessary expenses, especially those connected with the repairs or renewal of public buildings and the provision for residences of public officers, are only deferred and cannot ultimately be avoided. Indeed, the longer such works are delayed the heavier will be the cost ultimately involved. * * * His Excellency can never regard the public works of a Colony merely as objects to which superfluous money spared by the exigencies of other services may be devoted. Public works which add to or improve the means of communication, which remove the causes of disease and stimulate industry and production, are, along with the administration of justice, the promotion of education, the maintenance of order, and the relief of sickness, the chief objects to which the funds of a State should be applied. Whatever diminishes the amount available for such objects is in itself an evil, however necessary an evil."

2. I have shown that public works of crying necessity are admittedly neglected for want of revenue. It is also true that, for want of revenue, another essential condition of good government, viz., the maintenance of order and the prevention of crime, cannot be realised in Ceylon to that degree which is consistent with efficient administration. The Inspector-General of Police has for some years thought that the strength of the Police must be largely increased if crimes of violence, thefts, and burglaries, especially in towns, are to be successfully coped with. His Excellency, in opening the present Sessions of the Legislative Council, said : "When addressing you last year at the opening of the Session I called your attention to the prevalence of unpunished, or inadequately punished, crime. I regret that I cannot perceive any improvement in this respect during the last twelve months. Crimes of violence continue to abound, and theft from dwelling-houses has become so common an offence, even in the capital, as to create a general feeling of insecurity." If the Government have not seen their way as yet to adding largely to the number of constables, who are well-known to be both underpaid and overworked, it is only because the revenue will not permit of the expenditure.

3. While in my opening speech I confined my attention to the revenue of 1888, the Colonial Secretary has discoursed on the general prosperity of the Island, upon which point also his opinions appear to me to be incorrect. His principal argument in proof of his contention is, that as in 1883 the revenue was Rs. 12,396,000, and as the estimated revenue of 1888 would be Rs. 13,784,000, the difference of Rs. 1,387,000 clearly showed that Ceylon was on the high tide of prosperity. Would that I could agree with him ! Without questioning the policy of comparing the *actual* revenue of a year with the *probable* revenue of another, I need only say that the sum of Rs. 1,387,000 is made up of (1) the proceeds of new taxation levied as Customs, Stamp, and Postal duties since 1884 to the amount of Rs. 500,000 ; (2) income expected from a pearl fishery, Rs. 400,000 ; (3) estimated increase of Colombo Port and Harbour Dues in 1888 over 1883, Rs. 21,000 ; (4) new rents to be charged from next year on imports hitherto passed free from the Government warehouses if cleared within three days of the landing, Rs. 70,000 ; (5) the increase of land revenue upon the introduction of the commutation system since 1884, Rs. 100,000 ; and (6) receipts from 41½ miles of a new line of railway from Náwalapiṭiya opened since 1884, Rs. 394,000 : which together aggregate Rs. 1,483,000 ! The increase in revenue is

thus due, not to a naturally prosperous condition of the Island, but wholly to new taxation and other new or accidental sources of income.

4. I quite agree with the Colonial Secretary that tea cultivation is making rapid progress, but it is a mistake to argue from that fact alone the general prosperity of Ceylon. We cannot be assured of this unless there is a general revival of commerce side by side with the successful cultivation of tea. In most of our industries, trades, and professions the cry is still "No profits." I believe that tea cultivation is slowly giving an impetus to trade, but I cannot admit that we are so prosperous that we may safely charge the revenue, next year or the year after, with the interest required for the Extension. We must wait till our prosperity becomes more general and certain, and during that period we have to determine whether or not the line admits of being carried on to *Badulla*.

5. I do not know what difficulties the Island would have experienced but for the reduction of Rs. 600,000 sanctioned by the Imperial Government on the Military contribution. His Excellency the Governor has found another mode of relieving the revenue by diminishing the annual expenditure on our roads. Since 1884 he has adopted what is called the "MacBride system" of maintenance (after the name of the present Director of Public Works), upon the merits of which there prevails the widest possible difference of opinion between the Executive Government and the public. Complaints, in which high officers of State are believed to have joined, are rife, that the roads have considerably deteriorated in condition and offer obstacles hitherto unknown to the carriage of traffic; but the Government persist in continuing the system, because, according to the Colonial Secretary, there is an annual saving of Rs. 500,000. If the Rs. 1,100,000 thus saved on the Military contribution and the maintenance of roads be added to the Rs. 1,387,000, referred to in the third paragraph as the proceeds of new taxation and accidental sources of income, we have a total of Rs. 2,487,000 to be deducted from the revenue of 1888 in order to have a legitimate basis of comparison between that year and 1883. The figures would then stand as follows: for 1883 Rs. 12,396,000; for 1888 Rs. 11,201,000!

6. The conclusions I arrive at from a study of the Estimates for 1888 are considerably strengthened by a study of the state of the revenue of the current year. According to the latest returns, His Excellency the Governor says (in his Message laid before the Legislative Council six weeks ago) that the revenue of 1887 will be Rs. 13,384,584. But this amount is much less than the revenue of 1881, when Governor Longden thought it right to abandon his advocacy of immediate Extension on the ground of a disappointing revenue. Lord Kimberley had anticipated this judgment in a letter to the Crown Agents, dated May 2, 1882, and confirmed it in a despatch to the Governor on November 16 of the same year, in which he declared that, in his opinion, "it was impossible, consistently with ordinary financial prudence, to embark in so heavy an outlay." And yet the revenue of the current year (1887), *though augmented by several new sources of income*, is only Rs. 13,384,584—much below the revenue of 1881, which amounted to Rs. 13,686,490.

7. Under these circumstances, I am by no means satisfied that we are on the high tide of prosperity, and that we may safely charge the revenue with the interest required for the railway loan on account of the Haputalé Extension.

8. I regret very much that owing to illness the Honourable Member for the Sinhalese community was unable to be present at the meeting of the Council when the discussion of the subject took place. He would have voted with me had he been present. In fact, he will place on record his views when he next attends Council.

8. The Council having gone into Committee on the Bill intituled "An Ordinance to amend the Criminal Procedure Code, 1883," the Attorney-General brought up the report of the Sub-Committee appointed on November 23 to report upon the Bill, and moved that it be read by the Clerk of the Council. Read accordingly.

The Attorney-General having reported the Bill as amended, it was, on the motion of the Attorney-General, seconded by the Colonial Secretary, ordered to be referred to the Law Officers of the Crown for report.

ADJOURNMENT.

9. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, December 21, at 2 o'clock P.M.

Wednesday, December 21, 1887.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. Lt.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.
The Hon. W. W. MITCHELL.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

NOTICE OF QUESTION.

3. The Hon. R. B. Downall gave notice of the following question:—

To ask why the European Planters serving on the Kalutara Juries of the Supreme Court do not receive the same rate of batta as those who serve on the Ratnapura Juries, in the same province, and as the Kandy Juries, namely, Rs. 5.

The Colonial Secretary having replied, the Hon. Member withdrew his notice of the question.

QUESTION.

4. The Hon. W. W. Mitchell, pursuant to notice, asked if Government intend to introduce at this Session of the Legislative Council a Merchandise Marks Act, and moved that there be laid on the table any papers on the subject beyond those submitted to the Chamber of Commerce in October last.

The Attorney-General having replied, the motion was agreed to.

ASSENT TO BILL.

5. The Colonial Secretary announced the assent of His Excellency the Governor to the Ordinance No. 21 of 1887, intituled "An Ordinance relating to the cultivation of Land for a share of the produce thereof."

PAPERS.

6. The Colonial Secretary laid on the table the following Papers :—

Sessional Paper XXI., 1887.—Statement showing the Amount of Schedule Fees received by the several Fiscals during the Quarter ended September 30, 1887.

Sessional Paper XXII., 1887.—Report of the Government Agent, North-Central Province, on the Petition of certain persons praying for exemption from labour along the Yóda-ela.

Sessional Paper XXIII., 1887.—Financial Statements laid before the Legislative Council during the Session of 1887.

BILLS.

7. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Mohammedan Marriage Registration Ordinance, 1886," was read a first time.

8. On the motion of the Colonial Secretary it was agreed that the order for the third reading of the Ordinance for making provision for the Contingent Services for the year 1888 be postponed until after the order for considering in Committee the Ordinance for making provision for the Supplementary Contingent Charges for 1887.

9. The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a Law in terms of the draft, on the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Criminal Procedure Code" was read a third time and passed.

10. In Committee on the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887," the Auditor-General brought up the report of the Sub-Committee appointed to consider the provisions of the Bill, and moved that it be read by the Clerk of the Council. Read accordingly. The Treasurer having reported the Bill as amended in Committee, it was, on the motion of the Treasurer, seconded by the Auditor-General, ordered to be referred to the Law Officers of the Crown for report.

The Colonial Secretary moved the suspension of the Standing Orders with regard to the reading and commitment of Bills. Seconded by the Treasurer, and agreed to.

The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a Law in terms of the draft, on the motion of the Treasurer, seconded by the Auditor-General, the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887" was read a third time and passed.

11. In Committee on the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1886," the Auditor-General brought up the report of the Sub-Committee appointed to consider the provisions of the Bill, and moved that it be read by the Clerk of the Council. Read accordingly. The Auditor-General having reported the Bill as amended in Committee, it was, on the motion of the Auditor-General, seconded by the Treasurer, ordered to be referred to the Law Officers of the Crown for report.

The Colonial Secretary moved the suspension of the Standing Orders with regard to the reading and commitment of Bills. Seconded by the Auditor-General, and agreed to.

The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a Law in terms of the draft, on the motion of the Auditor-General, seconded by the Treasurer, the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1886" was read a third time and passed.

12. The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a Law in terms of the draft, on the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1888" was read a third time and passed.

ADJOURNMENT.

13. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, January 11, 1888, at 2.30 o'clock P.M.

Wednesday, January 11, 1888.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. R. W. D. MOIR.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lieut.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.
The Hon. W. W. MITCHELL.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

ASSENT TO BILL.

3. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 1 of 1888, intituled "An Ordinance to amend the Criminal Procedure Code, 1883."

PAPER.

4. The Colonial Secretary laid on the table the following Paper :—

Sessional Paper XXVI., 1887.—Numerical Abstract of the Inhabitants liable to perform labour during 1888.

BILLS.

5. On the motion of the Attorney-General, seconded by the Hon. P. Ráma-Náthan, the Bill intituled "An Ordinance to consolidate and amend the Laws relating to Courts and their Powers and Jurisdictions" was read a first time.

6. On the motion of the Attorney-General, seconded by the Hon. P. Ráma-Náthan, the Bill intituled "An Ordinance to consolidate and amend the Laws relating to the Procedure of the Civil Courts" was read a first time.

7. On the motion of the Attorney-General, the second reading of the Bill intituled "An Ordinance to amend the Mohammedan Marriage Registration Ordinance, 1886," was postponed to the next sitting of Council.

ADJOURNMENT.

8. On the motion of the Colonial Secretary, the Council adjourned to Wednesday, January 18, 1888, at 2.30 o'clock P.M.

Wednesday, January 18, 1888.

PRESENT :

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. G. T. M. O'BRIEN.
The Hon. S. GRENIER.
The Hon. J. B. A. BAILEY.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lieut.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. A. L. DE ALWIS.
The Hon. R. B. DOWNALL.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. R. A. BOSANQUET.
The Hon. W. W. MITCHELL.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

MOTION.

3. The Hon. R. A. Bosanquet gave notice that he would at the next Meeting of Council move—

(1) For a return showing the Prisoners released since January, 1886, to January, 1888, by order of the Judges of the Supreme Court at their jail deliveries, giving the reasons for such discharge, and the name of the Magistrate under whose warrant each prisoner was confined.

(2) For such papers as the Government may deem it expedient to lay on the table regarding the Commission of Inquiry in connection with the existing prevalence of crimes of violence and theft from dwelling-houses, referred to in His Excellency's Address at the opening of the present Session of Council.

QUESTIONS.

4. The Hon. R. B. Downall, pursuant to notice, asked—

(1) If it be true that the Government Agent Western Province ordered the withdrawal of the iron ferry boat which was placed on the Riṭigaha-oya, and, if so, for what reason such an order was issued.

(2) If an estimate was framed for metalling the road the whole way between Ruanwella and Glen Ella, and if the road coolies are now employed on such or other road works, or by estate managers in the district.

(3) In connection with the above road, if the District Engineer reported it as in bad order in July and December, and stated that it would require to be remetalled, a sum of Rs. 15,400 being necessary, how came it that only Rs. 2,750 were voted in the Supply Bill, and what work it is proposed to do with that small sum of money.

The Colonial Secretary replied.

5. The Hon. R. A. Bosanquet, pursuant to notice, asked—

(1) If the Government would have any objection to lay on the table a return showing (*a*) the number of sentences of flogging passed in the Police Courts between January 1, 1885, and January 1, 1888; (*b*) how many were carried into effect; (*c*) the number of remissions, with the reasons for same.

(2) Also a return showing the sentences commuted (and remitted) by His Excellency the Governor from January 1, 1886, to January 1, 1888.

The Colonial Secretary replied, and laid on the table the return under heads (*a*) and (*b*).

6. The Hon. R. B. Downall, pursuant to notice, moved that in consequence of the disgracefully bad condition of that portion of the Badulla-Batticaloa road in the Eastern Province, a return be made showing the amount expended in 1886 and 1887 on the portions of the road in the Province of Uva and the Eastern Province respectively; and asked what steps are being taken to put that portion of the road, including the bridges, now complained of in good order.

Seconded by the Hon. R. A. Bosanquet.

The Colonial Secretary replied, and laid on the table the return asked for.

BILLS.

7. The Attorney-General moved, seconded by the Colonial Secretary, that the Bill intituled "An Ordinance to amend the Mohammedan Marriage Registration Ordinance, 1886," be read a second time.

On the question being put that the Bill be read a second time, the Council divided, with the following result:—

Ayes.	*Noes.*
The Hon. R. A. Bosanquet.	The Hon. W. W. Mitchell.
The Hon. P. D. Anthonisz.	
The Hon. R. B. Downall.	
The Hon. A. L. De Alwis.	
The Hon. P. Ráma-Náthan.	
The Surveyor-General.	
The Government Agent Central Province.	
The Government Agent Western Province.	
The Treasurer.	
The Attorney-General.	
The Colonial Secretary.	

Ayes, 11; Noes, 1; Majority, 10.—Carried. The Bill was accordingly read a second time, and the Council went into Committee thereon.

The Attorney-General having reported the Bill as amended in Committee, it was, on the motion of the Attorney-General, seconded by the Colonial Secretary, ordered to be referred to the Law Officers of the Crown for report.

On the motion of the Colonial Secretary, seconded by the Attorney-General, the Standing Rules relating to the reading and commitment of Bills were suspended.

The Clerk of the Council having read the report of the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the draft, on the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to amend the Mohammedan Marriage Registration Ordinance, 1886," was read a third time and passed.

The Hon. W. W. Mitchell gave notice that he would file a Protest against the Bill.

8. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to consolidate and amend the Laws relating to Courts and their Powers and Jurisdictions" was read a second time, and the Council went into Committee.

On the motion of the Attorney-General, the Bill was ordered to be referred to a Sub-Committee consisting of the Colonial Secretary, the Attorney-General, the Treasurer, the Hon. R. W. D. Moir, Acting Auditor-General, the Hon. P. Ráma-Náthan, the Hon. A. L. De Alwis, and the Hon. W. W. Mitchell, of whom three should form a quorum.

9. On the motion of the Attorney-General, seconded by the Hon. P. Ráma-Náthan, the Bill intituled "An Ordinance to consolidate and amend the Laws relating to the Procedure of the Civil Courts" was read a second time, and the Council went into Committee.

On the motion of the Attorney-General, the Bill was ordered to be referred to a Sub-Committee consisting of the Colonial Secretary, the Attorney-General, the Treasurer, the Hon. R. W. D. Moir, Acting Auditor-General, the Hon. P. Ráma-Náthan, the Hon. A. L. De Alwis, the Hon. R. A. Bosanquet, and the Hon. W. W. Mitchell, of whom three should form a quorum.

ADJOURNMENT.

10. On the motion of the Colonial Secretary, the Council adjourned *sine die*.

Monday, October 8, 1888.

PRESENT:

His Excellency the Hon. A. H. GORDON, G.C.M.G., President.

The Hon. Major-General W. G. D. MASSY, C.B.
The Hon. Sir E. NOEL WALKER, K.C.M.G.
The Hon. S. GRENIER.
The Hon. W. H. RAVENSCROFT, C.M.G.
The Hon. G. T. M. O'BRIEN.
The Hon. F. R. SAUNDERS, C.M.G.
The Hon. W. E. T. SHARPE.
The Hon. Lieut.-Col. F. C. H. CLARKE, R.A., C.M.G.
The Hon. P. RÁMA-NÁTHAN.
The Hon. P. D. ANTHONISZ, M.D.
The Hon. W. W. MITCHELL.

1. The Council met pursuant to notice. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

MEMBERS SWORN.

3. The Hon. Major-General W. G. D. Massy, C.B., and the Hon. Sir E. Noel Walker, K.C.M.G., were duly sworn.

PAPERS.

4. The Colonial Secretary laid on the table the following Papers:—

The Ceylon Blue Book for 1887.

Sessional Paper XVIII., 1887.—Statement and Account for the year ended December 31, 1887, prepared in terms of section 13 of the Widows' and Orphans' Pension Fund Ordinance, No. 20 of 1885.

Sessional Paper XXVII., 1887.—Statement showing the Amount of Schedule Fees received by the several Fiscals during the Quarter ended December 31, 1887.

Sessional Paper XXVIII., 1887.—Report of an inspection of the Pearl Banks, by Captain J. Donnan, Inspector.

Sessional Paper XXIX., 1887.—Further Despatches relating to the proposed Extension to Haputalé.

Sessional Paper XXX., 1887.—Report on the Failure of Oysters on the Chéval Paar, by Captain J. Donnan, Inspector.

Sessional Paper XXXI., 1887.—Further Report explaining the disappearance of the Oysters from the Chéval Paar, by Captain J. Donnan, Inspector.

Sessional Paper XXXIV., 1887.—Statement showing the Amount of Schedule Fees received by the several Fiscals during the Quarter ended March 31, 1888.

Sessional Paper XXXV., 1887.—Correspondence on the subject of the repair of the Máligákanda Reservoir of the Colombo Waterworks.

Administration Reports, 1887, Part I.—REVENUE:—
Memorandum by the Acting Principal Collector of Customs on the Customs Revenue Returns for 1887.
Report on the Western Province.

Administration Reports, 1887, Part II.—SCIENTIFIC:—
Report of the Director of Public Works.

Administration Reports, 1887, Part III.—JUDICIAL:—
Remarks and Statistics furnished by the Attorney-General.
Report of the Inspector-General of Police.
Report of the Inspector-General of Prisons.

Administration Reports, 1887, Part IV.—MISCELLANEOUS:—
Report of the Director of the Royal Botanic Gardens.
Report of the Conservator of Forests.
Report of the Director of Public Instruction.
Report on the Ceylon Government Railways.
Report of the Postmaster-General and Director of Telegraphs.
Report of the Acting Registrar-General of Lands.

Return to an Order of the Legislative Council, dated October 12, 1887.—*(Hon. P. Ráma-Náthan.)*

Return referred to in the notice of Motion in the Legislative Council, dated January 18, 1888.—*(Hon. R. A. Bosanquet.)*

MOTIONS.

5. The Colonial Secretary, pursuant to notice, moved that the Treasurer be authorised to pay, on the order of the Governor and out of the Revenues of the Island, the several sums for the respective services hereinafter mentioned:—

		Rs.
1.	*Hospitals and Sanitation.*—Travelling expenses of Medical Officers, Southern Province	800
2.	Do. do. General	1,000
3.	Temporary Smallpox Hospitals, Southern Province	1,200
4.	*Medical, Contingencies.*—Remuneration to Private Practitioners, &c.	3,000
5.	*Prisons.*—Western Province, Ratnapura: Excess of votes on account of expenses of diets at Labour Centres	300

		Rs.
6.	*Roads, &c.*—Central Province: For extension of Castlereagh road (Government Moiety)	9,000
7.	*Miscellaneous.*—Central Province: For works on road from Elahera to Pallégama, to afford relief to persons in distress at Laggala ...	1,000
8.	North-Western Province: To relieve distress in the Tittawęligandahe kóralé of Hiriyala hatpattu	2,500
9.	Registrar-General: To Registrars, for registering births and deaths ...	5,000
10.	*Transport.*—Agent, Western Province: Conveying and guarding Treasure...	100

Seconded by the Auditor-General and agreed to.

BILLS.

6. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance to amend the Ordinance No. 7 of 1863, relating to Merchant Shipping," was read a first time.

7. On the motion of the Attorney-General, seconded by the Colonial Secretary, the Bill intituled "An Ordinance to enable Joint Stock Companies to compound for the Stamp Duties payable on certain shares issued by them unstamped" was read a first time.

COUNCIL IN COMMITTEE.

8. The Treasurer brought up the Report of the Sub-Committee appointed to consider and report on the Bill intituled "An Ordinance to consolidate and amend the Laws relating to Courts and their Powers and Jurisdictions," and moved that it be read by the Clerk of the Council.
On the motion of the President the Report was taken as read.

9. The Treasurer brought up the Report of the Sub-Committee appointed to consider and report upon the Bill intituled "An Ordinance to consolidate and amend the Laws relating to the Procedure of the Civil Courts," and moved that it be read by the Clerk of the Council.
On the motion of the President the Report was taken as read.

CLOSING OF THE SESSION.

10. His Excellency the Governor closed the Session of the Council.

PROTEST.

By order of the Council the following Protest of the Hon. W. W. Mitchell, notice of which was given at the preceding sitting, is entered on the Minutes of this day's Meeting :—

I NOW submit my reasons for protesting against the carrying of the Bill entitled "An Ordinance to amend the Mohammedan Marriage Ordinance, 1886."

The Ordinance of 1886, providing for the registration of Mohammedan marriages (which has not received the sanction of the Imperial Government), was strongly disapproved of by large sections of the community, both European and native, because it was quite uncalled for, and would be "harassing and vexatious." It was repugnant to professing Christians, inasmuch as it involved a distinct and formal recognition of polygamous marriages, tending to the encouragement of a continuance of these; whereas, it is believed, that if the Mohammedan community were left alone, or treated in respect of marriage registration in the same manner as others in the Colony are, the effect of education and enlightenment would wean them from polygamous customs, which the law, as proposed, would tend to foster.

In my opinion the Mohammedan Code of 1806 ought to be abrogated in so far as it recognises the right of a Mohammedan husband in Ceylon to have more than one wife; and in support of this I may cite the opinion of the Acting Attorney-General in his report on the Ordinance No. 8 of 1886, wherein he says: "As a matter of fact, however, polygamy, except in very rare instances, is not practised in Ceylon, Mohammedans, as a rule, contracting only monogamous marriages." It is obvious, therefore, that special legislation, designed to cover the registration of polygamous marriages, is uncalled for.

One of the objects of the Ordinance of 1886 was to apply a remedy for alleged evils by making registration compulsory, and the Acting Attorney-General, in his report on the Bill already alluded to, stated that "to make registration simply optional would be to defeat the very object of the Ordinance." This, however, is precisely what is sought to be done by the Ordinance now passed, entitled "An Ordinance to amend the Mohammedan Registration Ordinance, 1886," for the amendment consists in the making of the registration permissive, thereby rendering the Ordinance in the opinion of its authors null and void.

The Mohammedans themselves have suggested a remedy for the evils arising out of the absence of proper records of marriages performed, and it is, "That their priests should be compelled to attest *kaduttams* in duplicate, and forward one copy to the Registrar-General for preservation." In this I agree, and I consider that if legislation is still determined upon, it ought to be of the nature indicated.

Colombo, January 26, 1888. W. W. MITCHELL.

SESSIONAL PAPERS.

1887.

I.—1887.

STATEMENT

SHOWING

THE AMOUNT OF SCHEDULE FEES RECEIVED BY THE SEVERAL FISCALS

DURING

THE QUARTER ENDED JUNE 30, 1887.

[*In continuation of No. LV of* 1886.]

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

FISCALS' SCHEDULE FEES.

STATEMENT showing the Amount of Schedule Fees received by the Fiscals of the several Provinces, agreeably to the 16th clause of the Ordinance No. 4 of 1867 and Ordinance No. 43 of 1884, during the Quarter ended June 30, 1887.

District.	Quarter ended June 30, 1887.							
	April.		May		June		Total.	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs	c.
Western.								
Colombo	261	30	475	25	357	45	1,094	0
Negombo	74	5	75	70	68	90	218	65
Kalutara	98	65	112	30	73	55	284	50
Ratnapura	23	50	22	40	23	50	69	40
Kégalla	45	90	38	85	42	15	126	90
Avisáwélla	5	5	14	55	7	40	27	0
Total ...	508	45	739	5	572	95	1,820	45
North-Western.								
Kurunégala	60	65	60	20	52	45	173	30
Chilaw	28	20	17	35	16	15	61	70
Puttalam	14	75	19	50	5	55	39	80
Kalpiṭiya	11	55	15	80	4	35	31	70
Total ...	115	15	112	85	78	50	306	50
Eastern.								
Batticaloa	113	50	96	80	58	85	269	15
Trincomalee	22	95	23	5	23	90	69	90
Total ...	136	45	119	85	82	75	339	5
North-Central.								
Anurádhapura	17	25	6	65	10	0	33	90
Central.								
Kandy	136	15	184	10	122	15	442	40
Mátalé	20	20	18	75	17	90	56	85
Nuwara Eliya	9	95	12	60	12	70	35	25
Hatton	22	0	29	30	30	95	82	25
Total ...	188	30	244	75	183	70	616	75
Uva.								
Badulla	51	0	56	25	66	75	171	0
Northern.								
Jaffna	301	20	312	5	301	25	914	50
Mannár	13	60	7	90	8	90	30	40
Mullaittivu	4	40	7	10	7	90	19	40
Vavuṇiya-Viláṇkulam ...	1	0	2	10	0	35	3	45
Total ...	320	20	329	15	318	40	967	75
Southern.								
Galle	146	20	142	30	184	70	473	20
Mátara	111	90	111	60	118	80	342	30
Taṇgalla	18	85	21	20	12	95	53	0
Hambantoṭa	2	75	1	70	9	65	14	10
Balapiṭiya	19	70	26	5	34	40	80	15
Total ...	299	40	302	85	360	50	962	75

RECAPITULATION.

	Quarter ended June 30, 1887.	
	Rs.	c
Western Province	1,820	45
North-Western Province	306	50
Eastern Province	339	5
North-Central Province	33	90
Central Province	616	75
Province of Uva	174	0
Northern Province	967	75
Southern Province	962	75
Total ...	5,221	15

II.—1887.

CASH BALANCES OF THE COLONY.

STATEMENTS

SHOWING

I.—Return of the Cash Balances of the Colony on July 31, 1887.

II.—Total Surplus Revenue on December 31, 1886, including the Balances of all Lapsed Votes to that date.

III.—The Balance of the Railway Construction Fund on December 31, 1886.

IV.—The Amount Available for Appropriation from Unclaimed Balances of the Loan Board Funds on December 31, 1886.

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

CASH BALANCES OF THE COLONY.

I.—Return of the Cash Balances of the Colony on July 31, 1887.

		Rs.	c.
Cash Balance on July 31, 1887	..	3,984,647	9

II.—Total Surplus Revenue on December 31, 1886, including the Balances of all Lapsed Votes to that date.

Nil.

III.—Balance of the Railway Construction Fund on December 31, 1886.

		Rs.	c.
Balance of this Fund on December 31, 1886	...	56,231	6

IV.—Amount Available for Appropriation from Unclaimed Balances of the Loan Board Funds on December 31, 1886.

		Rs.	c.
Balance available on December 31, 1886	...	69,051	72

NOTE.—Of this amount a sufficient sum should be reserved to meet claims for refunds.

Audit Office,
Colombo, September 24, 1887.

R. W. D. MOIR,
Acting Auditor-General.

III.—1887.

THE PEARL FISHERY OF 1887.

REPORTS

BY THE

SUPERINTENDENT OF THE FISHERY

AND THE

INSPECTOR OF THE PEARL BANKS.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

PEARL FISHERY OF 1887.

No. 1.

The GOVERNMENT AGENT, Northern Province (Superintendent of the Fishery), to the Hon. the COLONIAL SECRETARY.

Silávatturai, May 16, 1887.

SIR,—I HAVE the honour to forward for the information of Government copy of the diary kept by me during the recent fishery.

The banks fished were the Northern Mótaragam, about two and a quarter miles in length and half a mile in breadth, and the North-East Cheval, about two miles in length and half a mile in breadth.

The oysters on these banks were only three and a half years old, and it was estimated that they would yield fine fisheries in 1888 and in 1889, by which time they would have reached maturity.

As the oysters were young, it was not considered necessary to inspect the banks in November last. During the inspection of March, however, it was found that the oysters on the Mótaragam bank and on the southern part of the West Cheval were dying out, and should, if possible, be fished at once. Captain Donnan estimated the number on the Northern Mótaragam at 7,000,000.

Arrangements were accordingly made for fishing these oysters in the usual way, although it was late in the season to give notice of and commence a fishery. Intimation was given by telegram on March 18 and 19 to the principal merchants and traders of South India, who generally come to the fisheries, and to the divers of Keelakarai and Tuticorin, that there would be a fishery.

Notwithstanding the sudden and unexpected notice of a fishery, a sufficient number of merchants, traders, boatmen, and divers had arrived in Silávatturai by April 1 to admit of operations being commenced; and the fishing of the Northern Mótaragam was accordingly commenced on the morning of April 2 with 91 boats and about 700 divers, the number increasing in a few days to 116 boats and about 1,000 divers. Fishing was carried on on this bank till April 9.

The sample raised from this bank proved to be a very indifferent one, and did not, in my opinion, fairly represent the quality of the oysters on the bank. It was valued at only Rs. 104·15¾ equal to Rs. 9·87 the 1,000.

From this (the Northern Mótaragam) 8,434,330 oysters were fished, of which the Government share (5,622,887) sold for Rs. 103,664·83, at rates from Rs. 15 to Rs. 35 per 1,000.

The sample from the West Cheval turned out a very poor one indeed, and was only valued at Rs. 72·60, equal to Rs. 6·91 the 1,000.

The sample from the North-East Cheval was, however, a comparatively fine one, valued at Rs. 114·17½, equal to Rs. 11·14 the 1,000.

Taking into consideration the superiority of the sample, the large number of oysters on the bank, the eagerness with which the fishing of the bank was looked forward to by the large number of merchants and traders in Silávatturai, and the fact that the bank could be more easily fished than the West Cheval in the event of southerly winds setting in, as might be expected, so late as it was in the season, Captain Donnan and I deemed it advisable to fish the North-East instead of the West Cheval.

Fishing was commenced on it on April 11, and continued till the final stoppage of the fishing on May 7.

The total number of oysters fished from it was 22,513,575, of which the Government share (15,009,050 oysters) realised Rs. 292,430·74 at Rs. 14½ to Rs. 35 per 1,000.

The total number of oysters fished from both banks was Rs. 30,947,905, of which the Government share (20,631,937) was sold for Rs. 396,095·57. Adding to this the proceeds sale of sample pearls of Mótaragam and Cheval banks (Rs. 530·50), the total receipts on account of the fishery was Rs. 396,626·07. The expenses of the fishery will be about Rs. 50,000, leaving net proceeds Rs. 346,626·07.

The attendance of merchants and traders at the fishery was very much larger than it was expected it would be. Many of the leading merchants and traders of Madras and Negapatam arrived in Silávatturai before fishing commenced, and in a few days there were as many from all parts of Southern India as I have seen at any previous fishery. In addition to those who have generally come, there were on this occasion some pearl merchants from Bombay—Muhammedans, Banyans, Brahmins, and Jains—who had never been at a Ceylon fishery before, many of whom had come to buy pearls and not oysters. One of them informed me that he had never come to a fishery before, because he had never heard or seen notice of one.

I have annexed to the diary a list of the principal merchants who have attended the fishery,* and would beg to suggest that notices of any future fishery be sent to those of Bombay and Madras through the Agents of the Colony in Bombay and Madras.

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* Not printed.

Almost all the divers came from Keelakarai and Tuticorin: the greater number were, as usual, Muhammedans from Keelakarai. These men said that they had caulked up their boats at night, and got them ready as best they could immediately on receiving notice of a fishery. Some of them came over and worked in large Paumben boats built upon the European model, instead of in the ordinary native boats. They all worked well to the last.

The Paumben boats worked very well, having been able to beat in and out against an unfavourable wind much better than the native boats. They are much larger, safer, and more comfortable for the divers when going out and coming in, and when waiting on the bank during the night, than the native boats, and their use should, in my opinion, be encouraged. I believe there was at one time a prejudice against them, owing, it was said, to the difficulty experienced in paddling them when the wind failed. The divers and manducks managed, however, to make them go well through the water on this occasion.

Many of the Tuticorin divers came over in large "Tuticorin cotton cargo boats," which, like the Paumben boats, worked well. These divers rendered very efficient service, having worked quite as well as the Muhammedan divers. They left this with their boats when the unfavourable weather set in at the end of April.

There were at this fishery two Arab divers—one from the Persian Gulf, who had been working in Tuticorin for two years. This man used a horn nose-clip, the first I have seen used by any diver on the Ceylon banks. He went down alongside the inspection vessel, and was carefully timed by Captain Donnan: he was under water one minute and forty-nine seconds. This man worked very well, raising 3,000 oysters sometimes in a day.

The other Arab had an air-pump and dress, with which he tried to work one day in a boat by himself with his attendants; he raised, however, only 1,500 oysters, whilst the ordinary divers were raising from 1,500 to 3,000; so he abandoned the dress and worked during the remainder of the fishery as an ordinary diver, finding it more profitable to do so.

To the merchants and traders the results of the fishery have, I believe, from what I can gather, been tolerably satisfactory, though some complain of loss.

The Bombay merchants, who came merely to purchase pearls, expressed themselves somewhat disappointed, owing to the high prices at which pearls were selling, the prices having doubled as the fishery progressed. One Bombay trader said that he could get pearls cheaper in Bombay than at the fishery; that the demand for pearls in Bombay was for the European market; that the best pearls were selected for the European market, and the rest sold in India. It was also said that there was a demand for pearls just now in China.

Most of the merchants and traders who purchased and washed oysters have, I believe, from what I have heard, turned in their money with some profit, but not so much as they hoped for and looked for. It is stated that the Northern Mótaragam oysters and the oysters of the first two days' fishing of the North-East Cheval Paar paid them well, but that they all lost something on the oysters of the subsequent fishing from the Cheval.

There is no doubt that if the Mótaragam oysters could have been left till next year they would have been very rich in pearl. The oysters of both the Mótaragam and Cheval, it must be borne in mind, were only three and a half years old, and immature. The samples taken from them, though comparatively poor, were quite as good as could be fairly expected from oysters of that age. It is owing to the high prices at which pearls were selling after the fishery commenced, that the prices of oysters at the Government sales rose so much above the valuation of the samples.

At the close of the fishery the merchants said that the Mótaragam oysters yielded more and finer pearls than the oysters of the Cheval.

A peculiarity in the pearls of this year was the very large number of slate-coloured and brown pearls, commonly called "black pearls," amongst them.

The divers, boatmen, and manducks have all done very well.

To the people of the Mannár district, and I may say to the people of the Northern Province, but more especially to the people of the Músalai pattu of the Mannár district, the fishery, unexpected as it was, has been a perfect godsend.

It has afforded lucrative employment in many ways to a large number of cultivators whose crops have failed owing to the want of rain, to boat owners and petty traders, and to labourers from Jaffna and other places, who have earned as much as a rupee a day at times for services rendered to the merchants in carrying and washing oysters. It has also afforded employment to a large number of women and children in sifting sand for pearls.

Had it not been for the fishery, it is very probable that Government would have been called on to provide relief works for the people of the Mannár district.

The arrangements at Silávatturai for the fishery were carried on under the superintendence of Marisalpillai Seemampillai Mutaliyár, Adigar of Músalai, who deserves very great credit for the activity and zeal displayed by him in so pushing on the arrangements that no difficulty was experienced in commencing work on April 1.

Silávatturai was healthy throughout the fishery, as may be seen from the report of Dr. Keyt annexed.*

Sanitary measures were strictly enforced, and there was at all times a liberal use of disinfectants. The burning of coal tar as a disinfectant was much appreciated by the people, and application was made by some of the merchants that coal tar might be burnt near the private kottoos, so that the smoke might roll over them.

The food supplies were abundant, the bazaars having been always well stocked with articles of diet suited to all classes at the fishery.

* Not printed.

The water-supply was good and abundant. Although owing to the failure of rain there was, I may say, no water in the two tanks—Muttusamy and Donnan's tanks—at the commencement of the fishery, there was always a supply of good water from wells, twenty-seven in number, on the beach. Owing to the heavy squalls of rain which burst over the town in April, there was a fair supply of water in the tanks after the middle of April.

With the exception of a quarrel regarding the price of oysters between some Moormen of Mannár and Moorish divers of Keelakarai, which ended in a fight, there was no disturbance or breach of the peace during the fishery, the people having been orderly and well-behaved. There was very little crime, and that only of a petty nature.

A post office was, as usual, opened at Silávatturai during the fishery, but it was not found possible to run up a telegraph line in time for this fishery, as was done in 1881; and a special night telegraph post was therefore established between Silávatturai and Mannár to suit the convenience of the merchants and traders.

The Mannár Kachchéri and Courts were, as usual, removed to Silávatturai during the fishery, and were in charge of the Assistant Agent, Mr. Boake.

The medical staff consisted of Dr. Keyt, Colonial Surgeon of Jaffna, Mr. Strong, Medical Practitioner, and Mr. Moonyaiah, Health Officer.

The sanitation of the town was entrusted, as in 1880 and 1881, to Mr. Navaretnasinghe, Medical Practitioner, assisted by ten overseers and ninety scavengers. Dr. Keyt personally made health inspections of the town and divers' quarters twice daily, and saw that sanitary measures were properly carried out.

Officers for the several departments of the fishery were selected from all the departments in Jaffna and Mannár.

Mr. Tocke, Forester, acted as kottoo superintendent.

The police force on this occasion consisted of only five sergeants and thirty constables, all in charge of Sergeant Narayanasamy, No. 1,062, of the Jaffna police. The sergeants and constables have all behaved very well, and have rendered very good service. There has not been a single case of default.

The kottoo establishment under Mr. Tocke had very hard work at times, owing to the large number of oysters brought in. On one occasion they were working for over forty-eight hours, with scarcely any intermission, much of the time in heavy rain.

A reference to the diary will show the services rendered by the Inspection Department (of coxswains, boatmen, and engine driver and crew of the ss. Active), which was more especially under the immediate orders of Captain Donnan.

All have worked harmoniously, zealously, and well; and to all I am much indebted for cordial co-operation and assistance throughout the fishery.

I am, &c.,
W. C. TWYNAM,
Government Agent.

GOVERNMENT AGENT'S DIARY.

Silávatturai, March 29, 1887.

REACHED this at 7 A.M., having come from Mannár by cart.

It was at midnight of March 17 that I received a telegram from Captain Donnan, intimating to me that the oysters on the Mótaragam Paar, about three and a half years old, were dying off, and should, if possible, be fished at once. He estimated the number at seven millions. These oysters, it was supposed, would arrive at maturity in 1888 and yield a fine fishery in March, 1888. As it appeared to me, in reference to the large number of oysters, that the only thing to be done was to have a regular fishery, I sent at once for some of the leading pearl traders and Chetties in Jaffna, and asked them if it would be possible to collect divers and traders at Silávatturai for a fishery, late as it was in the season. They informed me that the people were very anxious for a fishery, and that no difficulty would be experienced in getting together a sufficient number of divers and traders to fish up and purchase the estimated quantity of oysters They also informed me that there was just now a very great demand for pearls. Although it was late to give notice of, and to commence a fishery, it appeared to me that an effort should be made to get as much as possible off the bank. I telegraphed, therefore, to the principal merchants known to me in Madras, Negapatam, Kailapatam, and other places, and to the leading men of the Moorish divers at Keelakarai, intimating to them that there would be a fishery, and that seven millions of oysters was the estimated number to be fished from the Mótaragam bank; and I reported by telegram to Government what I had done. I also replied by telegram to Captain Donnan, and requested him to send the head coxswain to Keelakarai for divers, as proposed by him, and telegraphed to the Adigár of Músalai to push on arrangements at Silávatturai for a fishery. On March 18 I received a telegram from Government sanctioning a fishery, and sent further telegrams to Madras, Tuticorin, and Paumben. I subsequently received a telegram from Captain Donnan, informing me that the West Cheval Paar oysters were also dying off, and that as many as possible should be fished from that bank also. I accordingly sent a draft Proclamation, as ordered, to Colombo, for publication in the *Government Gazette*, giving notice that there would be a fishery, and that both the Mótaragam and Cheval Paars would be fished if the weather permitted. Telegraphed to Mannár to make arrangements for fishing with 100 boats, if a sufficient number of divers come. From March 18 to 23 I was busy in sending stores to Silávatturai, and appointing officers for the several departments of the fishery.

Mr. Navaratnasingam, Inspector of Sanitation, was ordered to proceed to Silávatturai without delay, with at least 100 coolies, to assist the Adigar of Músalai in clearing the town and divers' quarters. He took with him a supply of disinfectants.

The Customs, Pearl Fishery Kachchéri, and a portion of the Kottoo establishments were sent off without delay, as I was afraid of the wind setting in from the S.W. Dr. Keyt, Colonial Surgeon, and the medical staff were also requested to proceed to Silávatturai as soon as possible.

On March 21 and 22 there was some rain, and on the night of March 22 from about midnight till 6 A.M. of March 23, a cyclone accompanied by heavy rain, thunder, and lightning, the wind going round from S.W. to W., N.W., N., N.E., and S.E. On the morning of March 23 it was blowing strong from N.E.

The ss. Serendib which had come up from Trincomalee on March 22, experienced the full force of the gale.

On March 24 I received a telegram from the coxswain who had been sent to Keelakarai for divers, informing me that 60 boats with divers were about to proceed to Silávatturai on Friday, March 25. I accordingly made arrangements to proceed to Silávatturai myself with the Jaffna police.

The Jaffna detachment selected for the fishery consists of four sergeants and twenty-four constables. Of these, one sergeant and three constables had gone on March 24 as an escort in charge of treasure for the Mannár kachchéri. The others were sent off in two boats on the evening of March 26. Received a telegram from Captain Donnan, in reply to one from me, informing me that he proposed to wash the sample on March 28.

At about 10 P.M. (March 26) I started from Jaffna in a Sinhalese kulla, hoping to reach Silávatturai on Sunday evening, March 27, in time to assist Captain Donnan in washing the sample. The wind set in, however, from the south-west, and on the morning of March 27 we had not got as far as Palativu. The police boats were in sight, but astern of us. At about 5 P.M. managed to get under Kumulamunai, and landed to cook, &c. Police boats out of sight. I had almost made up my mind to leave the canoe and go on by land, when the wind fell and went round to S.E. Ordered everything to be put on board as fast as possible, and started again at about 8 P.M.; the wind went round again to S.W., and blew hard all night; and in the morning we were some distance from land, and only managed to reach San Pedro, near Irakalamputty, in Mannár island, at about noon of March 28 (Monday). I determined then to go on by land from Mannár, and sent orders to the Adigar of Mannár to have carts ready for me on the Mannár causeway. After tracking along the coast for some distance, succeeded in reaching Oosimukenturai at 4 P.M. The boatmen being tired out, we landed there to cook. Started again at 7 P.M., and managed to reach Mannár ferry at midnight; there I transferred myself and baggage to carts, and reached this at 7 A.M., as already remarked.

At Oosimukenturai saw ten Paumben boats with Keelakarai divers and Moorish merchants. Asking them why they had come round instead of going direct to Silávatturai, they informed me that about sixty boats had started from Keelakarai; that the south-west wind had set in strong, and scattered them; that some had come round by Paumben, and some had remained at Paumben. The Adappen of Mannár, who waited on me at Oosimukenturai with the vidáné of Irukalampitti, informed me that forty boats were weather-bound at the South Bar, the wind having set in strong from the S.W. three days ago, and put a stop to the despatch of materials for the pearl fishery buildings; and that two boats loaded with olahs had foundered. Dr. Keyt and all the officers for the fishery from Jaffna had gone on, he said, before the S.W. wind set in, but that some of the boats with stores from Jaffna were detained at the South Bar, having, contrary to orders, delayed their departure from Jaffna.

Found on arrival that all the Jaffna officers had arrived, except the second clerk of the Pearl Fishery kachchéri, who only left Jaffna when I did.

Mr. Boake came to Arippu last night; the Mánnar establishment will follow immediately.

On arrival went on board the immigration vessel "Sultan Sekunder" to have an interview with Captain Donnan, who informed me that he had commenced yesterday to wash the samples, of which he had raised four, viz., from Mótaragam 10,550 oysters, North-East Cheval 10,253 oysters, North-West Cheval 10,508 oysters, and East Cheval 10,800 oysters.

Found preparations for the fishery wonderfully forward. Town and divers' quarters all cleared of scrub and weeds; buildings approaching completion; work delayed for want of materials from Jaffna and Mannár, owing to boats being weather-bound at the South Bar. The Adigar of Músalai deserves very great credit indeed for so actively pushing on the arrangements for the fishery. Landed with Captain Donnan at 10 A.M. Some diving boats and divers have arrived, but most of the boats are detained by the S.W. wind at the South Bar.

The ss. Active, which had been sent to the South-Bar to tow down boats with materials, returned at 5 P.M. with eleven boats in tow. Engine driver reported forty boats detained at South-Bar. Wind strong all day from S.W.

Silávatturai, March 30.

Wind strong all day from S.W. Washing of samples continued. A few boats arrived. Beach-master was ordered to number the boats which have come, and to issue red flags and badges.

Inspected the town, divers' quarters, &c., in the evening, accompanied by Mr. Boake, Dr. Keyt, the Adigar, and medical officers. Several divers' huts have been run up. Although there was rain here on March 21 and 22, there is, I may say, no water in the tanks. There is, however, a very fair supply of good water in the wells on the beach. The ss. Active was sent to tow down boats from South Bar. The wind lulled for a short time in the evening.

Silávatturai, March 31.

Washing of samples continued. Engaged appointing boat-guards, counters, scavengers, &c. Have arranged to work with one hundred boats, if there are sufficient boats and divers.

ss. Active returned in the evening with twenty boats in tow. Several boats have come in under sail.

Wind lulled in the evening and went round and blew off the land. Gave notice that boats would go out to-morrow if the weather become favourable. There are divers sufficient for fifty boats at least.

Traders are beginning to come in. Sergeant Naranasamy, No. 1,062, in charge of Jaffna police, finding that the boats could not come down against the S.W. wind, landed with his detachment at Vallapadu, twenty miles from Jaffna, and marched sixty miles to this, leaving baggage in the boats and bringing only arms, ammunition, and accoutrements. None of the men fell out, and all marched in together at 4 P.M. to-day, having left the boats on March 29. The sergeant has acted with great promptitude and decision, and the men have behaved well.

I had intended to bring only twenty-four sergeants and constables from Jaffna, but as it appeared from a reply received by me to a telegram addressed by me to the Inspector-General of Police, that there was some difficulty in regard to detaching men from the Colombo force, I caused the Jaffna detachment to be

increased to twenty-eight sergeants and constables, and arranged with Mr. Boake to bring down the Mannár police, consisting of a sergeant and six constables, thus bringing up the force for service at the fishery to five sergeants and thirty constables. This afternoon I received a telegram from Mr. Campbell asking me to have boats ready to land Colombo police from the ss. Serendib on her arrival off Silávatturai on April 2. I telegraphed back requesting him to countermand the order to the Colombo police, as other arrangements had been made.

Silávatturai, April 1.

There being every appearance to-day of the setting in of fishery weather, gave orders to warn the boats and divers to be ready to go out if the land wind set in to-night.

Ninety-two boats have been numbered, and there are about 700 divers.

Several merchants have arrived The Kateeb (Sheik Mohamadu Katib) of Madras, who purchased oysters largely during the fishery of 1881, and subsequently most of the oysters of the small Chilaw fishery, arrived to-day, and called on Captain Donnan and myself.

Adivirayan Chetty, chief of the Comatty Chetties of Nágapatam, telegraphed from Jaffna to the effect that he was weather-bound at Nayinatívu.

Gave sergeant of police full instructions regarding the duties of the police during the fishery, and in regard to guards at the treasury and the kottoos

Appointed some boat-guards and counters, and made final arrangements to commence fishing.

The samples from the Mótaragam and North-East Cheval were sorted and valued by some Moorish traders and a man of Madras, Sivasangra Taravady, brought by the Kateeb. Their valuation will be given in to-morrow.

Silávatturai, April 2.

Commenced fishery to-day with ninety-one boats. I went out to the bank with Captain Donnan in the "Sultan Sekunder," which left Silávatturai about midnight, towed by the ss. Active. Anchored on the bank to be fished, viz., the North Mótaragam, early in the morning. About 7 A.M. saw a steamer coming up from the southward, which proved to be the ss. Serendib, with passengers and stores for Silávatturai. She brought up Mr. A. M. Ferguson, C.M.G., proprietor of the *Ceylon Observer;* Lieutenant Thorburn, Argyll and Sutherland Highlanders; Mr. Siedle, Manager of one of the Boat Companies of Colombo, and Mr. Lutszwitch and thirty-eight native passengers for Silávatturai, fifteen tons of coal for the ss. Active, and an iron chest for the kachchéri. Captain Robson having placed the steam launch at the disposal of the passengers who wished to see the diving, steamed amongst the diving boats for about an hour watching operations. One diver, said to be an Arab from the Persian Gulf, attracted attention, being provided with a horn-clip, with which he tightly closed his nostrils before going down. I believe the use of a clip of this nature is common amongst the divers of the Mediterranean and Persian Gulf, but I have never seen one used before on the pearl banks of Ceylon. There is another Arab diver in Silávatturai provided with an air-pump and dress. I have not seen him. He has been employed, I am told, in Tuticorin.

The boats started for Silávatturai at about 1 P.M., and Captain Donnan and I went on in the ss. Serendib to the anchorage beyond the reef, and then on to Silávatturai, with the passengers and Captain Robson in one of the inspection boats towed by the steam launch.

Exhibited the sample from the Mótaragam, which was valued at only Rs. 9 87 the 1,000, and then held the sale, at which there was a very fair attendance of traders and merchants. Prices ranged from Rs. 15½ to Rs. 35 the 1,000. The Government share, amounting to 842,360 oysters, sold for Rs. 18,277·94. One boat brought in 23,000 oysters.

The town is beginning to fill fast, and has now the appearance it had during the fisheries of 1880 and 1881.

There must be about 1,000 divers now in the place.

Some Trichinopoly merchants arrived to-day.

Weather fine. Boats in early. Captain Donnan returned with Captain Robson to the ss. Serendib at 1½ P.M. The ss. Serendib steamed down to inspection vessel, put Captain Donnan on board, and then steamed off on her voyage north-about through Paumben.

Silávatturai, April 3.

One hundred and three boats went out last night and brought in to-day Government share 931,169 oysters; sold at Rs. 15 the 1,000, realising Rs 13,967·54.

Boats in early. An attempt was made to bring the price down to Rs. 10, but it failed.

Went to the bank in the ss. Active in the forenoon and followed the boats in.

Adivirayan Chetty, head of the Comatty Chetties of Negapatam, arrived to-day. Heavy squall of rain from the land immediately after the boats came in. All boats in by 4 P.M.

Mr. Tocke, Forester, who is going to act as kottoo superintendent, arrived last night, and took up his duties to-day. Says he requires more assistance, the work being very heavy.

Silávatturai, April 4.

Four kulla dhonies, as they are called, came in with traders to-day, and a steam launch, the "Madharu Menatchy," brought twenty-six traders from Tuticorin.

Went out at about 9 A.M. in the ss. Active to the bank, accompanied by Mr. Ferguson; returned at 2 P.M. reaching Silávatturai at about 4.30 P.M.

One hundred and fourteen boats went out last night. Brought in to-day Government share 854,983 oysters; sold for Rs. 15,097·69, at rates from Rs. 16 to Rs. 19 the 1,000.

The kottoo establishment being insufficient for the number of boats employed, sent orders to Mr. Toussaint, sub-collector of Mannár, and the Adigar, to come down and act as kottoo clerks, and appointed Mr. Tilliampalam to act as kottoo accountant. Mr. Marusalpulle Nicholas will act for Mr Toussaint; the head tidewaiter for Mr. Marusalpulle Nicholas at the south bar; the Udaiyár of Mannár east will act for the Adigar of Mannár.

In the morning, before going out to the bank, went down to the private kottoo grounds, accompanied by Mr. Boake and the Adigar, complaints having been made that there was not sufficient ground cleared for private kottoos, the applications for kottoo grounds being very numerous this year. Ordered Adigar to

to extend the clearing. Kottoos have already been erected on most of the grounds allotted. Fine fishery weather.

Silávatturai, April 5.

One hundred and sixteen boats went out last night. Brought in Government share 680,540, sold at from Rs. 19 to Rs. 22 the 1,000, realised Rs. 13,394·30.

Went out to the bank at 9 A.M., accompanied by Mr. Harvey, Provincial Engineer, who had come to Silávatturai on duty.

The sea breeze was light when the boats left the bank, and it failed them when from two to three miles from the inspection vessel. Picked up thirty-five of them when about two miles from the ship, and took them in tow; the wind, however, set in again from the N.W., and the boats ran for Silávatturai, those in tow dropping off one by one and making sail. All reached the kottoo in good time. Heavy squall of thunder, lightning, and rain from the land, late in the afternoon.

The Arab diver with the dress worked on the bank in a boat engaged apparently by him for himself and attendants. He did not appear to have made much. He only brought up about 1,500 oysters, of which the divers' share was 500. There were no other divers in the boat, and the cost of the boat and hire of attendants had to be met from the proceeds sale of 500 oysters, about Rs. 10. Many of the ordinary divers brought up much larger quantities of oysters.

Silávatturai, April 6.

Mr. Ferguson left Silávatturai this morning for Colombo, *viâ* Anurádhapura. He and Mr. Harvey travel together as far as Madawachchi.

One hundred and fourteen boats went out last night. Went out in the ss. Active to the bank in the forenoon.

Weather very threatening all last night. Heavy banks of clouds, with vivid lightning and thunder, over the land from N. to S.E. Captain Donnan informed me that the wind was strong during the night from the north with a heavy sea, the inspection vessel pitching heavily all night; he was of opinion that there had been bad weather in the south, and seemed to think that we had been visited by the tail of a cyclone.

The boats got out very early to the bank. No sea breeze to-day. The boats crowded round the ss. Active in the hope of being towed in. To prevent confusion, the ss. Active was steamed out, and the boats then gradually left the bank with a light air, which was scarcely strong enough to move them through the water. When about two miles from the ship, the wind set off from the land with rain, and the boats anchored. Steamed down in the ss. Active to take up the boats furthest from the ship in order to put a stop, if possible, to the practice of boats loitering round the ship whenever there is any appearance of unfavourable wind, in the hope of being towed in. When ahead of the foremost boat, stopped and sounded whistle for the nearest boats to come to the ss. Active. It was simply astonishing to see how the divers and boatmen made their boats go through the water with their paddles. The ss. Active was very soon surrounded by a very much larger number of boats than she could tow. Was obliged to cast them all off; then steamed on for about half a mile, and anchored during a squall from the land; this gave time for some of the boats to pull up. Took twenty-four and the inspection boats in tow, which were about as many as the ss. Active could fairly tow. Towed them down towards Kondachchy, cast them off, the wind setting in from south, which enabled all the boats to make sail again. Steamed back to reef; placed an inspection boat with white lights to mark it, and then placed two inspection boats with red and green lights to mark the two rocks which lie in the track of vessels coming in to Silávatturai by the reef channel. Steamed out again at sunset, and picked up nine boats, two of them not very far from the ship; steamed in and cast them off at the anchorage. All boats in by 10 P.M. Heavy banks of clouds over the land and over the sea on south, with vivid lightning and thunder. Boats brought in 569,785 oysters; Government share sold for Rs. 10,270·63, at from Rs. 17 to Rs. 19 the 1,000.

Bank giving signs of exhaustion. Gave notice to the traders after the sale that probably there would be only one more day's fishing off the Mótaragam bank.

Silávatturai, April 7.

One hundred and eight boats went out. Fished till 12.30 P.M.; brought in comparatively small loads. Weather very fine. Boats got in early with fresh north-westerly breeze. Land squall in the evening with rain. Heavy banks of clouds over the land and down to S.W., with vivid lightning and thunder. Boats brought in 547,655 oysters. Government share sold for Rs. 9,863·62, at from Rs. 17·50 to Rs. 19·50 the 1,000.

Silávatturai, April 8 (Good Friday).

Only eighty-eight boats went out, the Roman Catholic divers having remained on shore.

Boats in early. Brought in Government share 624,785 oysters, which sold for Rs. 11,925·02, at from Rs. 18·50 to Rs. 23 the 1,000.

A steam launch, the "Nora," came in with traders from Colombo.

The Moorish divers asked for one day's rest. Told them to go out to-night, complete fishing of Mótaragam bank, and rest on Sunday (Easter Sunday). They agreed to this. Easter Sunday's rest will suit all classes.

Squall of rain from the land in the afternoon.

Gave notice to the traders that the fishing of the Mótaragam would be closed to-morrow.

Silávatturai, April 9.

One hundred and fifteen boats went out. Closed fishing of the Mótaragam.

Went out accompanied by Mr. Boake in the ss. Active.

In the afternoon Captain Donnan shifted inspection vessel to the north-east Cheval bank, and then came on shore with Mr. Boake and myself in the ss. Active, to-morrow being Sunday. Boats got in early. Brought in Government share 571,610 oysters; sold for Rs. 10,868·09, at from Rs. 19 to Rs. 19·50 the 1,000. Reached Silávatturai at 6 P.M. Heavy squall of rain, lightning, and thunder over the land.

On landing held sale of oysters. A combination to bring down the price of oysters to Rs. 10 had been made between the Moorish traders and the Chetties. It broke down, however, owing to some Chetties bidding

up contrary to the agreement. At the close of the sale the Chetties asked for protection, saying that the Keelakarai Moormen were going to assault them. The Keelakarai Moormen denied any intention on their part of assaulting the Chetties, but used some very strong language against the Chetties, who, they said, at first suggested the combination and got them to agree to it.

Silávatturai, April 10 (*Easter Sunday*).

Exhibited sample of North-East Cheval to traders in the afternoon, valued at Rs. 11·14 the 1,000, a superior sample to that of the Mótaragam.

The traders who came to see the sample, chiefly Moors, expressed their satisfaction at the sample and the valuation. The valuation, in my opinion, is low.

Heavy squall of thunder, lightning, and rain, which lasted about three hours in the afternoon.

Boats ordered to go out.

Silávatturai, April 11.

Commenced fishing North-East Cheval. One hundred and sixteen boats went out last night.

Went out to bank with Captain Donnan in the ss. Active at 9 A.M., accompanied by Mr. Fowler. ss. Active engaged laying out buoys, so did not leave inspection vessel till 4 30, reaching Silávatturai at sunset. Boats all in early just before a squall from the land. Heavy rain with thunder and lightning in the evening. Heavy banks of clouds over land, and to south over the sea, with vivid flashes of lightning. Boats brought in very heavy loads. Government share, Rs. 1,265,010 oysters.

Held sale immediately after arrival. Prices ran up to Rs. 20 and Rs. 20·50 the 1,000, most of the oysters being disposed of at Rs. 20·50.

The sale bungalow was the scene of very great excitement during the sale. It was crowded with merchants and traders, who all tried to secure lots of oysters at Rs. 20·50 the 1,000, the demand being much greater than the supply. Sale realised Rs. 25,925·21.

A brig came in with traders and goods from Colombo.

Silávatturai, April 12.

One hundred and seventeen boats went out last night. Brought in to-day Government share 898,295 oysters. Went out in the ss. Active at 10 A.M.; returned after the boats, reaching shore at 5 P.M. Held sale on arrival. Oysters sold mostly at Rs. 19·50 the 1,000. A few bids went up to Rs. 20 and Rs. 20·50. Heavy clouds over the land in the evening, but no rain.

Mr. Fowler left in the morning for Vavuniya-Vilángkulam.

Silávatturai, April 13.

One hundred and sixteen boats went out last night. Fished north-east of ship. Brought in Government share 968,525 oysters. Boats left ship at 1 P.M. with light south-westerly breeze.

Went out in the ss. Active at 10 A.M., returning after boats. Picked up boat No. 6, which had step of mast carried away, and towed her in.

Held sale on arrival. Great competition again. Sold all for Rs. 19,485·26, at from Rs. 19·50 to Rs. 22 the 1,000.

Captain Donnan informed me when I got on board the inspection vessel, that he had the Arab diver with the nose-clip, referred to in entry of April 2, brought on board, and sent him down alongside the ship. Captain Donnan carefully timed him. He was down one minute and forty-nine seconds. This is the longest time I have heard of any diver on the Ceylon banks remaining under water. Captain Donnan questioned this man as to the possibility of getting divers for the Ceylon banks from the Persian Gulf, in the event of more divers being required at any time. He said that no difficulty would be experienced in getting divers from the Persian Gulf; that there are a great many of them, and if a steamer were sent for them as many as were wanted would come; that they are not a troublesome, turbulent race, and would get on with the Keelakarai divers, who were, like them, Muhammedans; that he himself got on very well with the Keelakarai and Tuticorin divers; and that he had now been two years in Tuticorin working with the Tuticorin divers. Being asked if he would enlist as a Government diver on the terms on which the Government divers are now retained and paid, said he would, and would work as a boatman in Captain Donnan's boat in the intervals of fisheries and inspections.

The Arab diver with the dress has, I am informed, given up the dress, and is now working as an ordinary diver, finding he can work better in lifting oysters without the dress.

Silávatturai, April 14.

One hundred and fifteen boats went out last night.

Before going out to the bank in the ss. Active this morning, I had an interview with a Bombay pearl merchant, Mohamadu Harees, who arrived here a day or two ago. I met him last night, and he promised to show me to-day some large Persian Gulf pearls, which it was said were finer than our Cheval and Mótaragam Paar pearls. He brought a few pearls, three of large size. He said he had given Rs. 500 for two of the large pearls and Rs. 35 for a very fair pearl, worth perhaps here till lately Rs. 25. One of the large ones shaped thus ⌒ would have been, if perfectly round, as large as a very fine pearl found during the fishery of 1874, for which Rs. 500 was offered, and which was sold by the finder for Rs. 600.

The other large pearls were mis-shapen, and had flaws in them. On my pointing out to the owner that he had paid well for the small 35-rupee pearl, he said that he was prepared to pay Rs. 35 each for any number of such pearls he could get during the fishery, as they were much in demand in and about Bombay. He was accompanied by the Arab diver with the nose-clip, referred to yesterday, and corroborated much that the diver had told us regarding the Persian Gulf divers, and said that if he were written to he would send any number of divers that might be required from Bombay.

The pearls shown to me were in no way superior to the Ceylon pearls, and had not the lustre of the Cheval and Mótaragam Paar pearls.

The price of pearls has risen very much since the commencement of the fishery, owing, apparently, to the large number of merchants who have come here this year to purchase up pearls. It is said that the price of pearls now is double what it was.

Went out at 11 A.M., reaching bank at about 12.30. Found Captain Phipps, Master Attendant of Tuticorin, on board the inspection vessel. He had come across in the ss. Margaret Northcote, which steamed in to Silávatturai in the afternoon.

The boats got in in good time with heavy loads. Government share, 1,144,400 oysters. Held sale on arrival. Sold off all at from Rs. 21 to Rs. 22·50 the 1,000, realising Rs. 24,566·80. Weather as yesterday.

Captain Phipps accompanied me to Silávatturai in the ss. Active.

Silávatturai, April 15.

One hundred and thirteen boats went out.

Went out at 10 A.M., accompanied by Captain Phipps. Boats left the bank at about 1 P.M., and when about one-third of the way in were met by a land squall, which obliged them to anchor. Left the ship at once in the ss. Active to tow in boats. Picked up boats and towed them down towards Kondachchi, picking up others on the way; a breeze from the N.E. springing up enabling those beyond the reef to run in. Towed in twenty-four boats and the inspection boats to anchorage, then steamed out to bring in some boats becalmed close to the reef, placing a boat with light to mark the inner rock. Steamed out to the outer rock, stopped and picked up three boats, towed them in, and anchored at 7. All boats but one in by 7 P.M., the remaining boat, which had run in to Kondachchi, did not turn up till 10 P.M. Held a sale on landing. Sold off all the oysters at from Rs. 23·50 and Rs. 26·50 the 1,000, a merchant purchasing up any balance at Rs. 23·50 the 1,000. The inspection vessel was moved half a mile to S.E.

Silávatturai, April 16.

The counting of the oysters was not completed till 4 A.M. this morning, the kottoo establishment having worked all night. The Government share amounted to 1,533,445 oysters. The amount realised was Rs. 37,123·46.

The boats were got out again during the night with some difficulty, owing to the threatening appearance of the weather. Heavy clouds with drizzling rain, accompanied by thunder and lightning, rolled over from the land, the wind blowing in strong gusts till about 2 A.M. One hundred and thirteen boats, however, went out, the last leaving the shore at about 5 A.M.

Went out in the ss. Active, accompanied by Captain Phipps. Weather very threatening, a swell rolling in from south-west. Squall from south-west at about 11.30. Every appearance of a set in of south-westerly wind, which will put a stop to diving for a time.

To-morrow being Sunday, divers asked that they may be allowed rest for a day. Told them before leaving bank that they might have the Sunday. Captain Donnan came on shore with Captain Phipps and myself in the ss. Active. Reached Silávatturai at about 6 P.M. Held sale. Sold off as many oysters as I believed there would be in the kottoo at Rs. 14·50, Rs. 15, and Rs. 15·50 the 1,000, the price having gone down owing, it was said, to a large proportion of the oysters being young and smaller than those brought in before. The divers' prices have also gone down from Rs. 20 to Rs. 17 as the boats came in.

Boats were all in by 6 P.M.

Two vessels, one the schooner "Geraldine" and a brig, came in from Colombo with passengers and goods.

Captain Phipps informed us that a dhony had left Tuticorin with some merchants for Silávatturai just before he did.

As regards the earnings of divers, it may be as well to record that Captain Phipps informed us that the Tuticorin divers had telegraphed to their friends that they were earning Rs. 4 a day each by the sale of their shares of oysters.

Wind went round and blew off the land in the evening, bringing up heavy squalls of rain, lightning, and thunder.

Silávatturai, April 17, *Sunday.*

No diving to-day. Counting of oysters completed at 2 A.M. Government share, 1,595,135 oysters, sold for Rs. 23,854·60. Total receipts to date, Rs. 252,274·91. The total of the oysters brought in yesterday, including divers' share, was 2,392,702—the largest haul I have ever known in one day.

Went down to the kottoo with Captain Donnan to have a look at the oysters. Some truth in what the merchants say: there is no doubt a large number of small immature oysters in the fishing of yesterday. The divers say that the oysters were lying thick in clusters on the bank.

Went round town and divers' quarters. The town is full of traders and merchants from all parts of India. The place is well supplied with rice and other articles of food consumed by the people. The divers' quarters are as full as I have ever seen them, and the divers were all enjoying their holiday. Inspected police arms, ammunition, &c.

As all but a small quantity of oysters had been issued from the kottoo, gave orders that the kottoo counters need not keep watch to-night, the kottoo establishment having worked almost without intermission for two days and two nights, and up to noon to-day.

Wind S.E. and S. during morning, S.W. at noon and early part of afternoon. Heavy squall of rain from land late in afternoon. Land wind in the evening. Boats ordered out.

Silávatturai, April 18.

One hundred and sixteen boats went out.

Went out with Captain Donnan and Captain Phipps in the ss. Active at 8 A.M. Captain Donnan moved the vessel about a mile to S.E., the ground round vessel having been fished out. Returned to Silávatturai in the ss. Active, accompanied by Captain Phipps, at 5.30 P.M., having left the bank at 4 P.M. Boats in early with fresh S.W. breeze. Towed in No. 16 from bank with rudder broken.

Was informed on landing that two large cobras had been killed in the bungalow used as office by the kottoo superintendent inside the kottoo: one was in the box of printed forms, and was discovered by Mr. Bertus, clerk of the kottoo, who put his hand on it when about to take out some printed forms; the other was killed when coming into the bungalow.

Boats brought in good loads. Government share, 1,309,715, sold for Rs. 21,455·80, at from Rs. 16 to Rs. 17 the 1,000. Heavy clouds over land in the evening, but no proper land breeze. No rain. Boats ordered out.

Rs. 40,000 in notes arrived from the Jaffna kachchéri to be exchanged for rupees—part of fishery earnings. Shipping off a large quantity of silver at the close of a fishery, with the wind from S.W. and a heavy sea on, is difficult and risky work, and so I thought the best plan would be to send the silver to Jaffna whilst the weather is fine, and get notes in exchange.

Engaged in the evening and up to 10 P.M. receiving over the notes and getting the silver ready for shipment to-morrow.

Silávatturai, April 19.

There was no proper land breeze last night; 115 boats, however, went out and got to the bank with a southerly breeze, except three. Two returned to land from the bank, some of the divers being sick.

Before leaving Silávatturai had Rs. 40,000 packed in boxes, and gave over charge to the kanakapulle and police escort who brought the notes from Jaffna. Sent back in the treasure boat some empty boxes, casks, &c.

A Chilaw thief was caught last night in the act of removing a box from a boutique. He was handed over to the police.

Went out to the bank with Captain Phipps in the ss Active followed by the "Margaret Northcote" at 10 A.M.; wind fresh from S.W. with heavy sea. Boats all working well north-west of ship. Captain Phipps left at 12.30 in the "Margaret Northcote" for Paumben and Tuticorin.

Boats left the bank at 1.30 P.M. Got in early with good loads. Government share, 1,167,505 oysters.

Reached Silávatturai in the ss. Active at 5.30 P.M. Held a sale on landing. Sold off all oysters, except 120,505, at prices from Rs. 20 to Rs. 25. One lot of 100,000 sold at Rs. 25 the 1,000.

The divers have this year established a regular oyster market immediately outside the Government kottoo, on the open ground between the Government kottoo and the Custom-house. This ground is crowded between 4 P.M. and sunset, and up to 9 and 10 P.M. when the boats are late, with divers and traders carrying on a brisk trade in oysters. The divers' shares have this year been almost all disposed of immediately on removal from the kottoo, very few having been taken by the divers beyond the Custom-house.

The Chilaw thief was convicted and sentenced to six months' rigorous imprisonment. He and a thief sentenced to three months for stealing some pearls, were sent to Jaffna in the treasure boat.

The wind and sea went down towards evening, the wind going round to S. and S.E. There were heavy clouds over the land with vivid lightning, but no rain and no regular land wind.

Captain Donnan having reported the tindals of twenty boats for fishing beyond the buoys and disobeying orders, had them brought up, and warned them that they would be punished by forfeiture of shares of oysters if they disobeyed orders again. Boats fished to-day north-west of ship. Oysters pronounced by the traders and divers to be good and mature.

Silávatturai, April 20.

One hundred and eight boats started last night and reached bank with southerly breeze.

Before leaving in the ss. Active sold off the 120,505 balance oysters at Rs. 20 the 1,000, bringing up amount of sale of yesterday's oysters to Rs. 25,391·60. Boats got in early with fresh S.W. breeze. Appearance of a break in the weather.

Some more boats were reported by Captain Donnan for persisting to work beyond the buoys. Ordered their shares to be detained in the kottoo till I got on shore. The tindals and divers begged hard for pardon on this occasion, promising to obey orders in future. Warned them that if they were reported again the whole of their shares would be forfeited.

Boats brought in Government share 1,079,020 oysters. Sold all at from Rs. 20 to Rs. 23 the 1,000, which realised Rs. 22,400·40. No regular land wind.

Silávatturai, April 21.

One hundred and twelve boats got out with southerly breeze. Got in early with strong south-westerly breeze. Went out in the ss. Active, and returned after the boats. Boats brought in Government share 1,079,805 oysters. Held sale on landing, but, owing to an attempt made by the same party who got up the combination on April 9, to bring down the price to Rs. 19, could only dispose of about half the quantity of oysters brought in as Government share. Closed the sale, and informed the traders that they might take the oysters at Rs. 20·50 the 1,000, that being the average price at the sale.

Was informed that several large pearls have been found by the traders, and that the oysters of the Cheval Paar are yielding a large amount of pearls. Cloudy over land on evening, but no regular land breeze.

Silávatturai, April 22.

One hundred and thirteen boats started last night with southerly breeze, but the wind headed them and came in from S.W., driving all in but four, which succeeded in getting on the bank with some difficulty.

The four boats brought in Government share 50,370 oysters. Sold all and all the remaining oysters of yesterday at Rs. 20 and Rs. 20·50, realising Rs. 9,839·59, making total on account of April 21 Rs 21,786, and of April 22 Rs. 1,053·59.

Made arrangements by placing lights in inspection boats near rocks to tow the boats out to Kallar in batches of thirty during the night. The wind went round, however, and blew fresh from the S.E., and almost all the boats put out for the bank. Wind fresh in from S.W. during the greater part of the day.

It transpired during the sale to-day that, in order to bring down the price of the oysters, the leaders of the combination had spread about false reports to the effect that the North-West Cheval was being fished instead of the North-East, and that the oysters were not like those hitherto fished.

Some large pearls, it is said, have been found in the Mótaragam oysters which are now being washed.

Silávatturai, April 23.

Of 114 boats which put out last night, 94 reached the bank; the others, which started late, had to put back.

Went out in the ss. Active at 11 A.M. against a heavy sea and strong south-westerly breeze; picked up one of the returning boats and towed her on to the bank, and towed two others which were beyond the buoys on to the bank.

The boats brought in Government share 1,190,500 oysters. Sold all at from Rs 19 to Rs. 20 the 1,000, which realised Rs. 23,114.

Arranged with Captain Donnan that the boats should be sent out, although to-morrow will be Sunday, as the divers rested on Friday; and as the weather may change now at any moment, no opportunity of fishing should be lost.

Left the bank at 6 P.M. The wind and sea went down during the afternoon, and in the evening heavy clouds with thunder, lightning, and rain rose over the land, and a regular land wind set in; favourable weather for fishing apparently setting in with the new moon.

Silávatturai, April 24 (*Sunday*).

One hundred and seven boats fished to-day, having reached the bank without difficulty. Some of the Roman Catholic divers did not go out. Fine morning for fishing.

Went out early in the ss. Active in order to tow to the bank any boats that may have failed to reach it.

Boats got heavy loads, and got in early with strong sea breeze, bringing in Government share 1,206,630 oysters.

The combination having been at work, could not effect a sale. The divers were selling off in the evening at Rs. 14 the 1,000. Sold 476,630 oysters at Rs. 17 to Rs. 18 the 1,000. All sold by April 28 at Rs. 15·50, Rs. 17. and Rs. 18 the 1,000, realised Rs. 19,479·49. Informed the traders that they might have the oysters at Rs. 18 the 1,000, which is a fair price.

There was a heavy swell on the bank and strong S.W. breeze when I left the bank at 4 P.M. in the ss. Active. Both went down considerably by 6 P.M., when heavy black clouds rose over the land, and from about 6 30 P.M. to 9 P.M there was a violent storm of thunder, lightning, and rain; the wind then became variable, blowing from S.E., E., N.W., and W. with drizzling rain. The divers all turned into their huts, and it was found impossible to get any of the boats to go out.

Silávatturai, April 25.

Towards daylight the wind set in from S.E, and 31 boats put off for the bank, reaching the bank between 7.15 and 9.15 A.M.

Fished till 2 o'clock. Brought in Government share 324,285 oysters; sold for Rs. 5,512·85, at Rs. 17 the 1,000.

Sent the ss. Active out in the morning to tow to the banks any boats that might fail to reach it.

The ss. Active returned at about 5 P.M. with letter from Captain Donnan, informing me that the weather on the bank last night was very much like that experienced by us on shore; that during the morning the weather had been fine for fishing; and that he was much disappointed to see only 31 boats, the first of which (as remarked above) only reached the bank at 7.15 A.M.

Sold only 10,000 oysters at Rs. 18 the 1,000. Offers were made for some at Rs. 16·50 the 1,000, which were refused. These offers were made on my informing the traders that they might have the oysters at Rs. 17 the 1,000, provided they took the whole fishing of yesterday at that rate. Rs. 17 the 1,000 was the highest bid made on the 24th. The object is to bring down the price, if possible, to Rs. 14, and even Rs. 12 the 1,000.

Wind freshened up during the afternoon from S.W. Clouds banked up over land, but were driven back by the S.W. wind. No land breeze. For a short time the wind came in from S.E., but went back again to S.W. at about 7 P.M.

The wind went down and set in from S.E. during the night, and boats made an attempt to go out to the bank: all but one (No. 41, a Tuticorin boat) were driven back, and were seen sailing back at daylight. The tindals explained that they were met by a strong S.W. wind just beyond the reef, and found it impossible to go on.

Silávatturai, April 26.

Sent the ss. Active to tow out some of the boats. She took in tow twenty-one boats.

Boat No. 41 came in at about 2 P.M. Tindal said that he had managed to reach the bank, and the divers fished up 2,000 oysters, and then gave up, saying they could dive no longer owing to the heavy sea. The tindal further said that there was a heavy sea with strong S.W. wind on the bank, and that it would not be possible for the divers to dive, even if the boats were towed out and placed on the bank, so long as the present weather continued. He said he saw the ss. Active towing only two boats, the others having been cast off. The ss. Active arrived at about 5 P.M from bank.

Engine driver reports, that when he got beyond the reef the boats began to knock against each other, owing to the strong wind and heavy sea, and the tindals, except two, cast their boats off and returned to Silávatturai. He towed only two to the bank. Three boats managed to get out by themselves, making in all five on the bank to-day. They brought in Government share only 15,260 oysters, which were sold on April 27 at Rs. 18 the 1,000, realising Rs. 274·68. Succeeded in selling off 34,520 oysters of April 24's fishing at Rs. 17 the 1,000.

Traders all busy washing their oysters.

Silávatturai, April 27.

Wind strong from S W. all day, but in the evening clouds banked up over the land.

Sent the ss. Active out with letter to Captain Donnan. She returned with Captain Donnan at 5 P.M. Heavy sea and strong south-westerly wind on the bank.

Sold off some more oysters at Rs. 17 the 1,000. Merchants all refused to give more than Rs. 15 the 1,000 for the balance. I accordingly made arrangements with Mr. Tocke to pile the oysters in a corner of the kottoo, and, if this weather continues, to wash them on account of Government.

A request was made to me on behalf of an influential merchant of Madras to give over the oysters to him at the "tariff," as he called, it viz., "the value per thousand of the sample." This I, of course, declined to do, offers of Rs. 14, Rs. 14·50, and Rs. 15 per 1,000 having been made.

Seeing preparations going on for piling the oysters, the Moorish traders and Chetties came to the kottoo, and an offer of Rs. 15·50 the 1,000 was made by an influential Moorish trader of Keelakarai, who has purchased largely during the fishery. The Chetties declined to make any advance on this offer,

and under existing circumstances I thought it as well to accept it. The balance of oysters in the kottoo was therefore disposed of.

Immediately the acceptance of the offer was made known, the Moormen and Chetties, who had steadily refused all day to give more than Rs. 15 the 1,000, surrounded the purchaser and offered him 50 cents and Re. 1 the 1,000 in advance of his bargain.

In the evening clouds banked up over the land, and it seemed for a short time as if the boats might go out again.

The stoppage in the fishing, as far as I can judge at present, is rather an advantage than otherwise. The private kottoos are full of oysters, and the merchants and traders experience some difficulty in storing, watching, and washing the unusually large number of oysters that have been brought in and purchased by them in a comparatively short time.

Money must also be running short amongst the smaller dealers. About Rs. 600,000 must have been expended already in the purchase of oysters, very little of which has as yet been turned in again by the sale of pearls.

The oysters brought in yesterday were sold at Rs. 18 the 1,000, realising Rs. 274·68.

Silávatturai, April 28.

There was a lull in the wind for a short time this morning, and many of the boats tried to go out; they were, however, all driven back.

The wind freshened up in the forenoon and blew in strong from S.W., heavy black clouds gathering all over the land.

Heavy rain during the afternoon with vivid lightning and loud peals of thunder. Towards evening, wind variable, blowing at intervals from N., N.W., W., E., N.E., and S.E. In the evening, drizzling rain with wind from S.E.

Boats ordered to get ready, but owing to the continuance of rain the divers would not turn out.

Inquiries made this morning for oysters. It was thought apparently that all the oysters had not been sold, and offers of Rs. 18 the 1,000 were made for any that might remain in the kottoo.

Commenced washing sample from the East Cheval.

Silávatturai, April 29.

Walked out in the morning to Arippu and back, inspecting roads, buildings, &c.

The rain of yesterday seems to have been pretty heavy. There is now a fair supply of water in Donnan's tank, in which the people bathe.

Wind from S.E. in the morning, going round gradually to S.W. For a time the wind from west in the afternoon; in the evening back to S.W. Heavy clouds over land in the afternoon. The inspection vessel came in from the bank.

Silávatturai, April 30.

Wind from S.W. The ss. Active was sent out to the bank to serve as mark for the inspection vessel, which was ordered to proceed to the bank again.

Sifting of the sample from East Cheval completed.

Silávatturai, May 1 (*Sunday*).

Wind strong from S.W. all day. The ss. Active returned form bank. Some of the boatmen and divers having stated that they were ready to make an attempt to get out to the bank, provided the ss. Active towed their boats to Kallar. The engine driver was ordered to get up steam by 2 P.M. By 5 P.M. twenty boats had been made fast astern of the ss. Active, and she steamed off with them to Kallar.

Silávatturai, May 2.

Wind was strong all day from S.W. Many of the boatmen made application to be allowed to go. Told them to wait till the fishery is proclaimed closed.

The boats were seen during the morning trying to make their way to the bank; one by one, however, they gave up and ran in, except four, which managed to reach the bank and brought in 17,660 oysters. The boatmen state that it is blowing very hard on the bank, with a heavy sea, which rendered it almost impossible for the divers to work.

Sold the oysters off in small lots of 100 on the special request of small traders, who said they wanted small quantities to take away with them. Realised Rs. 519·30. The divers sold off in retail at the rate of Rs. 100 the 1,000. The four boats must have made Rs. 800 amongst them.

The wind increased, and blew in almost a gale from S.W. in the evening.

Some boatmen and divers who had reached the bank to-day said, when they returned, that they would go out again to-night if the ss. Active would tow the boats to the Mótaragam or to Kutiramalai. When the wind set in however strong in the evening, they declined to go.

As Captain Donnan seemed to be of opinion that the S.W. monsoon had set in, after consulting him decided on closing the fishery.

Caused publication to be made that the fishery was closed, and sent orders to sub-collector to give clearance to all the boats applying for them.

Paid off boat guards.

Gave notice that merchants and traders should prepare to leave Silávatturai by May 10.

Silávatturai, May 3.

Paid off counters and kottoo establishment, beachmaster's establishment, and Customs, up to May 5, excepting sub-collector, who will remain till May 5, and be paid up to May 8. Paid off divers and manducks up to May 5. Wind strong all day from S.W. Inspection vessel came in.

Silávatturai, May 4.

Withdrew the kottoo guard this morning. Wind strong all day from S.W.

Boats have begun to leave the place. Several went off to-day.

Many of the officers employed in the kottoo, &c., left in the morning for Jaffna.

Made an atttempt to sell the three samples of the Cheval Paar, but without success. An offer of Rs. 100 was made for the sample of the North-East Cheval.

Silávatturai, May 5.

There was an extraordinary lull in the wind last night, and this morning there was a squall accompanied by rain from the north; the wind having worked round to the north for a time, it gradually went back to the S.W., but did not blow with the violence it has done during the last two days. The morning was fine, and the sea comparatively calm,—every appearance, in fact, of a fine fishing morning.

Sold off the lanterns used during the fishery, and eight chairs purchased for the fishery, realising very nearly what they cost.

Some more of the officers went off during the day and several diving boats, some of which had to anchor between Arippu and Vaṅkalai, the wind having for a time turned against them, as before remarked.

Captain Donnan went out to the inspection vessel to make some plans of the banks.

The ss. Active was sent to tow three of Kos Mohamadu's boats to Karaitivu. They will be taken to Colombo by the canal.

In the afternoon some of the leading boatmen and divers came and asked to be allowed to go on fishing. They said that the weather would be fine for fishing for at least ten days more; that the land breeze would set in again to-night; and that if their boats were towed by the ss. Active to Kondachchi they would be able to get out to the bank. They said there were fifteen boats yet in Silávatturai, and a sufficient number of divers for them. As the inspection vessel was not on the bank, I told them I would consult Captain Donnan when he came on shore, and give them a final answer.

Captain Donnan seemed very doubtful about the weather remaining favourable, but consented, in reference to the wishes of the divers, to take the vessel out to the bank early in the morning.

The ss. Active returned from Karaitivu, and the engine driver was ordered to have steam ready to take Captain Donnan to the vessel at 10 P.M., then to tow the boats to Kallar, and then to return to the inspection vessel and tow her to the bank.

The divers said that if they were allowed to go out, some of the boats that have gone would return. Of this, however, I had my doubts, as, in fact, I had of the weather continuing favourable for ten days. However, as the divers wished to go out, and as the establishment now here must remain till May 12 or May 15, in order to give the merchants time to clear out, I told them that they might go out as long as the weather remained favourable. Of course, anything that comes in now, however small, is clear gain.

The sub-collector not having been able to go, owing to contrary wind, I detained him.

Clouds banked over the land during the afternoon, and in the evening there was a great deal of lightning over the land; the wind went back, however, to the S.W., and I began to think that there was an end to the boats going out; but at 9 P.M. the divers came to the bungalow and again asked that the ss. Active might tow them, as they were determined to go out if allowed to do so. The orders to the engine driver were therefore repeated.

I went down with Captain Donnan to the beach and saw him off at about 10 P.M.; the wind was then blowing fresh from about S.S.W. Soon after I returned to the bungalow the wind fell, and there was for a short time a lull. It then blew lightly off the land, gradually going round to S.E.

The ss. Active towed off fifteen boats.

Not having been able to effect a sale of the sample pearls yesterday, I handed them over to the Adigar of Músalai, requesting him to dispose of them to the best advantage to the traders. This afternoon he reported that he had sold the three samples as follows:—North-East Cheval, valued at Rs. 114·17½, for Rs. 190; North-West Cheval, valued at Rs. 72·60, for Rs. 110; East Cheval, for Rs. 60.

The Mótaragam sample, valued at Rs. 104·15¾, was sold in the same way on April 24, for Rs. 170·50. Total of four samples, Rs. 530·50. Amount realised all paid in.

Silávatturai, May 6.

This morning the wind was blowing in light from S. Two of the diving boats which left yesterday returned.

Re-engaged kottoo superintendent, Mr. Bertus kottoo clerk, sixteen counters, and twelve coolies; ordered them to get the kottoo ready again for twenty boats.

Told Mr. Maartensz, sub-collector, that he might return to Jaffna. Any little Customs work that may have to be done will be attended to by Mr. Bertus.

The inspection vessel, the ss. Active, and the fifteen diving boats towed out by her, were not to be seen in morning.

The boats returned at about 4 P.M., bringing in Government share 110,875 oysters. Sold off at once at from Rs. 16·50 to Rs. 18·50 the 1,000, realising Rs. 1,885·88.

The ss. Active came in at about 4.30. Captain Donnan wrote to say that he had reached the bank at 7.30 A.M., and that the first two diving boats only reached the bank at 9.30, and that the divers had had hard work owing to the jumping sea on the bank.

Just as the counting of the oysters was completed in the kottoo, a disturbance took place in the divers' oyster market (the open ground adjoining the kottoo ground). It originated, it was said, in some Moor petty traders of Mannár snatching away some oysters belonging to the leading Keelakarai diver, which were exposed for sale, and which, according to the diver's story, the Mannár people had agreed to buy at Rs. 17 the 1,000, and which they afterwards insisted on being given to them for Rs. 15 the 1,000.

One of the diver's party was carried into the kottoo in a fainting state, alleged to have been assaulted in a very nasty manner by one of the Mannár Moormen. The man said to have committed the assault and several others were arrested, and taken to the police station. Immediately after, another disturbance occurred, and it was found necessary to clear the ground. When order was restored some more arrests were made, and the accused (Moormen of Mannár), who are all known to the headmen, were released on bail. In the meantime the assulted man was carried in a litter, suffering, it was said, very great pain.

Wind lulled a little in the evening, going round to south.

Silávatturai, May 7.

Went round the town, bazaar, divers' quarters, &c., this morning, accompanied by Mr. Tocke and the Inspector of Sanitation. The bazaar and main-street are still full of traders and merchants; the divers' quarters are, however, nearly empty.

The divers agreed to go out again last night, and promised to be ready by 11 P.M. astern of the ss. Active. None of them, however, turned out. At 5 A.M. I sent to know if any of them intended to go to the bank ; and six boats then turned out with all the available divers. The ss. Active started off with them at 7.30, reaching the bank at 10 A.M. They returned at about 4 P.M. with fresh south-westerly breeze, bringing in Government share 52,615 oysters, which were all sold in one lot at Rs. 18 the 1,000, realising Rs. 947·07. I noticed that many of the divers looked very fagged and done up ; and Captain Donnan, who came in in the ss. Active, said that they had had very hard work on the bank owing to the heavy sea. Asked them if they intended to go out again ; they said they would.

In the forenoon all the parties concerned in the disturbance of yesterday were brought up. The assaulted man was brought in a litter, unable to speak, it was said. As the matter looked serious, Dr. Keyt was sent for, who carefully examined him, and said that there was nothing the matter with him, and that he was in no way injured, and bore no marks of having been assaulted. It then turned out that after this man had been brought in to the kottoo yesterday, and was being taken to the custom-house to be examined, he suddenly broke away from Dr. Keyt, seized a stick, and was about to commit an assault, when he was stopped, and that it was his act which gave rise to the second disturbance.

The parties ultimately came to an amicable settlement, the Mannár Moormen paying the Keelakarai divers Rs. 50 for the loss of their oysters and the loss of their time to-day. They were warned, and allowed to go.

The wind freshened up in the evening from S.W. At 9 P.M. information was brought that the divers were packing up their things and getting ready to go away, and that there was no probability of any boats going out to fish to-morrow. I felt satisfied, from what I saw at the kottoo after the boats came in, that the divers had had about enough of it. I determined, however, to leave it to them to stop when they liked.

Silávatturai, May 8 (*Sunday*).

Wind strong from S.W. all last night and to-day.

The ss. Active was sent to bring in the inspection vessel.

The leading Keelakarai divers came to pay their respects and take leave : said that they were all ready to come next year.

The leading diver, to whom Rs. 50 compensation was given yesterday in consequence of loss of oysters during the disturbance of May 6, begged to be allowed to return the money to the Mannár Moormen. He said that he had done very well during the fishery and did not wish to keep the money, as they had settled all their differences. Told him he could return the money if he liked. The leading Mannár Moorman came in about an hour after, and said he had received the money, and that they were now all good friends again.

The inspection vessel came in from the bank in the afternoon.

The Bombay merchants left this yesterday for Pésálai and Devipatam, returning, I believe, to Bombay *viâ* Madura.

Silávatturai, May 9.

Paid off up to last night the kottoo establishment re-engaged on May 6.

The divers have all gone. There are now only three Jaffna boats engaged to take officers to Jaffna, and three kalla boats engaged to take away merchants in port.

Some Moorish traders of Colombo asked to be allowed to return to Colombo in the ss. Active when she goes. Told them they might do so.

The Kateeb will go to Tuticorin in the inspection vessel.

Gave orders that all the establishments now here were to be paid up to May 15, by which time the merchants will all have left Silávatturai.

Silávatturai, May 10.

Engaged writing report, counting money, &c.

Went round town and divers' quarters in the evening, accompanied by Mr. Tocke. Divers' quarters empty, and nearly all cleared up by the scavengers.

Merchants gradually clearing out.

Dr. Keyt informed me that he had closed the hospital this evening. Wind strong from S.W.

Silávatturai, May 11.

Captain Donnan and I have often thought that it would be very desirable to remove the Government kottoo to the site of the present private kottoos, and remove the private kottoos further down towards Kondachchi. The only objection to this is, that it would remove the Government kottoo too far from the quarters of the officers and the police. This objection might be got over by placing a stronger guard over it than is at present required.

The objections to the present site of the Government kottoo are, that it is too far from the private kottoos and too near the bazaar and officers' quarters, and in the event of the oysters not being sold at any time, the stench from them is blown over the officers' quarters and bazaar, thus placing the bazaar between two fires as it were, viz., the private kottoos and the Government kottoo. The carrying of oysters from the Government kottoo to the private kottoos past the bazaar and the divers' quarters, and through a crowd, is also objectionable, and has given opportunities for thefts of bags of oysters by the coolies employed by the merchants. This morning Captain Donnan and I inspected the private kottoo grounds. We there met the Kateeb and some other merchants, and asked them what they thought of the proposed change in the site of the Government kottoo. They all said that the change would be a very great convenience to them, and begged that the proposed arrangement might be carried out.

There is plenty of room for both Government and private kottoos beyond the divers' quarters, and we determined on moving the Government kottoo to the new site before the fishery of 1888, and gave orders accordingly to the Adigar, who also approves of the proposed arrangement.

Adhivirayan Chetty, head of the Cometty Chetties of Negapatam, came to take leave ; he goes away to-morrow morning.

The inspection boats have all been hauled up and housed in the Custom-house.

The Custom-house requires thorough repair.

Engaged in the afternoon packing up bills, notes, &c., for despatch to Colombo to-morrow in the inspection vessel.

Wind blowing hard all day from S.W.

Dr. Keyt and staff left last night for Mannár and Jaffna.

Silávatturai, May 12.

Captain Donnan left at noon to-day for Colombo in the inspection vessel "Sultan Sekundar." He will go to Tuticorin, where he will land the Kateeb and some other merchants, and then go on to Colombo.

Some Colombo merchants have been allowed to go to Colombo in the ss. Active.

The Kateeb takes with him about 100 bags of sand, &c., from his kottoo, which he will sift in Madras.

Captain Donnan took charge of the bills, notes, &c., to be handed over to the Treasurer. The "Sultan Sekundar" left at about 2 P.M. in tow of the ss. Active, which will tow her as far as Karaitivu, and then go on to Colombo.

Wind strong from S.W.

Silávatturai, May 13.

Engaged with accounts, report, &c.

Some of the Mannár establishment left for Mannár.

At the request of some of the merchants, gave orders that the post office was to be kept open till May 20

Wind blowing in a perfect gale from S.W. in the evening.

Gave orders to the police to be in readiness to proceed to Mannár and Jaffna to-morrow.

Silávatturai, May 14.

Closed all fishery accounts to-day.

Inspected police arms, ammunition, and accoutrements. Police left for Mannár and Jaffna at 4 P.M.

Packed up treasure for Jaffna. Despatched Mannár treasure with the police.

The Pearl Fishery kachchéri shroff left at 10 P.M. with treasure for Jaffna in charge of a police escort. Mr. Boake and the remainder of the Mannár establishment left for Mannár.

The town and divers' quarters have all been cleared up, and the buildings are now nearly all dismantled.

Heavy clouds with lightning on the N. and N.E. in the evening. Wind strong from S.W.

Silávatturai, May 15.

The clouds worked up during the night from N. and N.E., and at midnight there was a heavy squall of thunder, lightning, and rain. The S.W. wind went down, and for a time in the morning it was quite calm ; the wind, however, gradually set in again as strong as before from S.W.

Paid off scavengers and let them go.

Mr. Navaretnasinghe left for Jaffna in the afternoon.

Went down in the evening with the Adigar of Músalai to the private kottoos and to the ground beyond it. There is plenty of room for the private kottoos along the odai from the bend on it near the beach to its mouth.

The Government kottoo can be put up beyond the odai, and the houses of the kottoo superintendent, kottoo establishment, counters, kottoo coolies, and Government boatmen, and a house for the police guard can be erected on the high ground behind and beyond the Government kottoo. The kottoo establishment will thus be entirely clear of any inconvenience from the private kottoos. The merchants will have the advantage of being able to get water on both sides of their kottoo ground by the new arrangement.

A small bridge must be erected across the odai at its mouth, for the convenience of traders, a road being taken from the gate of the Government kottoo through the middle of the private kottoo ground. The private kottoos must be erected in two rows, one on each side of the road. Another small bridge must be erected for the convenience of the divers across the odai, near the bend.

A path must be cleared for the divers over the high ground at the back of the odai. The divers can sell their oysters on the present private kottoo ground. Explained all to the Adigar, and told him to measure the ground and give me a rough sketch of the proposed arrangement of kottoos and buildings.

Saw some Keelakarai merchants at the private kottoos. They told me they had finished washing their oysters, and that they were going away in ten days.

The town is nearly empty. Wind strong from S.W. all day. The fishery is now finally closed.

W. C. TWYNAM,
Government Agent.

Silávatturai, May 16, 1887.

Account Particulars of Government Share of Pearl Oysters fished and sold during the Pearl Fishery of 1887.

Number of Oysters.		Rate per 1,000. Rs.		Amount realised. Rs.	c.
750,000	...	14½	...	10,875	0
1,171,169	...	15	...	17,567	54
1,301,615	...	15½	...	20,175	4
470,000	...	16	...	7,520	0
1,376,075	...	16½	...	22,705	24
1,110,310	...	17	...	18,875	28
530,000	...	17½	...	9,275	0
932,660	...	18	...	16,787	88
577,423	...	18½	...	10,682	33
1,406,110	...	19	...	26,716	9
1,759,295	...	19½	...	34,306	25
2,748,065	...	20	...	54,961	30
1,684,710	...	20½	...	34,536	56
1,190,000	...	21	...	24,990	0
1,010,000	...	21½	...	21,715	0
532,400	...	22	...	11,712	80
126,700	...	22½	...	2,850	75
32,000	...	23	...	736	0
216,445	...	23½	...	5,086	46
489,000	...	24	...	11,736	0
815,000	...	24½	...	19,967	50
137,000	...	25	...	3,425	0
1,000	...	26½	...	26	50
1,300	...	27½	...	35	75
25,000	...	28	...	700	0
25,000	...	28½	...	712	50
11,060	...	30	...	331	80
2,000	...	32½	...	65	0
200,600	...	35	...	7,021	0
20,631,937				396,095	57
	Proceeds sale of sample pearls of Mótaragam Paar		...	170	50
	Do. do. Cheval Paar		...	360	0
			Total...Rs.	396,626	7

No. 2.

The INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY.

No. 73.

Master Attendant's Office,
Colombo, May 25, 1887.

SIR,—I HAVE the honour to submit the following report on the recent inspection of the pearl banks off the coast of Arippu.

2. I arrived at Silávatturai on March 3, and proceeded out to the banks on the 7th. My first object was to inspect the bank off the island of Karaitivu, where I found a small patch of oysters in April, 1886, estimated to be fishable this year. (*Vide* 8th paragraph of my report dated April 19, 1886.) I had arranged previously with Mr. Twynam for sending down from Jaffna boats and divers to fish the patch, in the event of the oysters being still in existence, but, unfortunately, it was found that they had all, or nearly all, disappeared; there were only 68 oysters and 21 dead shells picked up by the four inspection boats during the examination of the bed.

3. I then proceeded to the Cheval Paar, and followed my usual practice of going over the whole of it before inspecting the Mótaragam Paar. On the east side of the Cheval, oysters of three and a half years were found in great abundance, and in a healthy condition, extending over an area of 15,415,625 superficial yards, and averaging 42 to a dive. I estimated the number of oysters on it at 195,750,540, which is only 6,984,057 less than my estimate of March, 1886.

4. On the west side of the Cheval oysters of three and a half years were found extending over an area of 8,694,375 superficial yards, and averaging 21 to a dive. I estimated the number of oysters on it at 38,135,202, which is somewhat less than half the estimate of March, 1886—a very serious loss in twelve months, attributable to the oysters dying off. Many dead shells were found, more especially on the southern part of the bed. Some of the dead shells bore traces of having been destroyed by skates, but the greater part of them bore no marks of injury whatever.

5. After completing the inspection of the Cheval Paar, I went over the Mótaragam Paar, and was grieved to find that on it also there was a very serious loss of oysters, more serious than on the west side of Cheval. I found that on the North Mótaragam the area of the bed containing oysters was not much less than it was last year, but the average number of oysters to a dive was less than half. On the South Mótaragam I found that both in area of bed and number of oysters to a dive there was a large reduction. I estimated the number of oysters on both north and south beds at 13,886,220, as compared with last year's estimate of 39,869,834, showing a loss of 25,983,614 oysters in twelve months. Many of the dead shells on the Mótaragam, like those on the West Cheval, bore evidence of destruction by skates, but some of those which at first sight seemed uninjured were, on closer inspection, found to have had small pieces bitten out of the thin part of the edges, which probably prevented the complete closing of the shells at that spot, and probably left a sufficient opening for the attack of some of the oysters' enemies amongst the smaller fry of animals, such as the whilk and crab.

6. Finding such a destruction of oysters going on on the Mótaragam, I determined to recommend the fishing of the northern part of it at once—the southern part contained too many young oysters, mixed up with those that were fishable, to make its fishing practicable; and on the afternoon of March 17, the day on which the inspection of the Mótaragam was finished, I despatched the ss. Active to Mannár with a telegram to the Government Agent at Jaffna, asking him if he could arrange for the fishery, to which he promptly replied that he could and would; and as in regard to the fishery which followed, Mr. Twynam has made a separate report, I may only add here that its result in revenue far exceeded my most sanguine anticipations at the outset.

7. Having decided on a fishery, the inspection of the pearl banks was brought suddenly to a close, as all efforts were then needed in preparing for the approaching fishery. I was somewhat disappointed in not being able to look over the Periya Paar Karre, Vaṇkálai Paar, Karaitívu Paar, and Muttuwartu Paar, on all of which young oysters were found last year; but I hope to be able to go over them in October or November next, when an inspection of the east and west sides of the Cheval will be necessary with reference to fishing them in March next.

8. Some explanation in regard to the fishing of the north part of the east side of Cheval, commonly called the North-East Cheval, seems to be necessary, when it was only at first determined to fish the Mótaragam; and the explanation is this: a much larger number of boats, divers, merchants, and traders—in fact all the paraphernalia of a fishery which had been advertised for months previously—having assembled for the fishing of the Mótaragam in an incredibly short space of time, there being a great demand for pearls, and the general disappointment that would have resulted from closing the fishery with the Mótaragam, the fishing of which only lasted eight days, determined Mr. Twynam to go on with the fishery as long as weather would permit, and I advised the fishing of the North-East Cheval, owing to the sample oysters lifted from it having turned out better than the sample of the west side of Cheval—in fact, better than the Mótaragam

sample—and owing to its being more favourable for the boats to reach during southerly winds which might be expected so late in the season.

9. The number of oysters fished from the North-East Cheval was 22,512,575, and the area gone over by the boats, but not completely fished, was 4,641,875 superficial yards, which leaves on the east side of Cheval still untouched an area of oysters of 10,773,750 superficial yards containing about 136,000,000 oysters, which, along with the oysters on the west side of Cheval, make up a total of about 174,000,000 oysters remaining to be fished next year. But I do not expect anything like that number to be actually fished; consequently, I look upon the revenue obtained from the North-East Cheval during the recent fishery (about Rs. 292,431) as clear gain, and in no way detracting from what may be realised next year.

10. The large number of oysters remaining on the Cheval led me to propose to Mr. Twynam the fishing of the west side of it in November next; but he was of opinion that a fishery at that season of the year would most probably break down from sickness amongst the divers and people employed in the kottoos, caused by chills from the rain and cold winds usually prevalent at that time; and it was decided that, instead of fishing in November, it would be preferable to commence the spring fishery of next year on February 15, which would be three weeks earlier than fisheries of that season are usually begun.

11. I regret having to report the failure of the experiments in artificial oyster preservation, referred to in the 10th paragraph of my report of April 19, 1886. The reef tank was found when I examined it on March 3, to have a deposit in the bottom of it of eighteen inches of mud, in which the oysters, which had been placed in the tank were buried, and of course dead. The cage of oysters, which was weighted with stone and sunk inshore of the reef, was found to have been broken up, presumably by the action of the last south-west monsoon sea, and the few oysters that were found entangled in the *débris* of the cage were dead. It is thus evident that the reef is not suitable for oyster cultivation, owing to the quantity of mud accumulated under the surface coral, and that the foreshore of Silávatturai Bay is too much exposed to the south-west monsoon sea. Perfectly clear and smooth water seems to be essential to the success of any experiments in artificial pearl-oyster cultivation, and I do not know of any spot in the neighbourhood of Arippu combining these two requisites.

12. I forward herewith a copy of my diary of the inspection and fishery.

I am, &c.,
J. DONNAN,
Inspector of Pearl Banks.

INSPECTION DIARY OF 1887.

Wednesday, March 2.

LEFT Colombo harbour at 8 A.M. in the barque Sultan Iskander in tow of the ss. Active, and after rounding the pier head made sail to assist our progress, the wind being light and from the eastward The sea breeze set in from the westward about 11 A.M., at which time we were abreast of Negombo. Passed Chilaw at 3 P.M.

Cast off the ss. Active at 8 P.M., and told her to anchor for the night and proceed again at 5 A.M. to-morrow. The barque Sultan kept under weigh all night, and made good progress, the wind keeping from S.W. and S., but light.

Thursday, March 3.

At 6 A.M. found we were abreast of Kroosaddy on Karaitívu, but a long way off the land; hauled in to the N.E.; wind light from S.E.

Passed the north end of Karaitívu at 9.30 A.M., and at 10 the ss. Active came up with us and took us in tow again.

Anchored in Silávatturai Bay at 1.30 P.M., and during the afternoon went out to the reef to examine the oysters left in the well in the centre of it last year; but I was much disappointed to find them all dead, having been smothered in mud, which was found to be a foot and a half deep in the bottom of the well. The rubble bank round the edge of the well was found to be perfect, not a stone of it having been displaced apparently; but I suppose the wash of the S.W. monsoon sea over the reef had carried the mud through the interstices of the coral, and deposited it in the well.

On the way back from the reef visited the wooden cage which was sunk with some oysters in it last year close inshore, and was sorry to find it broken up, and the few oysters found in it all dead; so that both of these experiments have turned out a failure. The reef would not do, owing to the quantity of mud below the surface coral, and evidently the foreshore of Silávatturai is too much exposed. Any further experiments must be carried on in a sheltered spot with perfectly clear water.

Friday, March 4.

The boatmen and divers are employed to-day in watering ship, twisting up the diving ropes, and putting the inspection boats in order.

Saturday, March 5.

Employed in watering ship, cutting firewood for ship, and running up the diving ropes and nets.

Sunday, March 6.

To-day we completed all preparation for going out to the banks. Ordered the coxswains to come on board to-night with the boats, boatmen, divers, and munducks. Swung the ss. Active to-day for error of compass.

Monday, March 7.

Got underweigh at 5 A.M. for the position of the sunken tanks on end of Karaitivu shoal. The ss. Active took us in tow, the wind being light, and from the S.E.

Found the tank about 10 A.M., and laid out the shoal buoy, placing the anchor just between the two tanks. The ss. Active then ran out a buoy on the West Cheval, one and a half mile from the shoal buoy, and after that she took the barque Sultan in tow for the bank off Karaitivu, where we found oysters last April, possibly fishable this March.

Anchored on the bearings at 4 P.M., and then the ss. Active laid out the buoys to guide the boats to-morrow. Sent a diver down after anchoring, who brought up one oyster and one dead shell.

On the run down from shoal buoy tried the correctness of the new patent cherub log, and found it registered one and one-tenth mile to the exact mile. This log will be found much more useful for laying out the buoys than the harpoon log hitherto used.

Fine weather to-day, but hazy with a S.E. and S.S.E. breeze in the morning, working round by south to a sea breeze in the afternoon from W.S.W.

Tuesday, March 8.

The boats went out at 7 A.M. with orders to the coxswains to bring in all the oysters found by the divers. They returned to the ship again about 1 P.M., having gone well over the bank, but without success. They made 209 dives on rock, 167 on sand, and only 14 on rock and a few oysters. They only found altogether 68 oysters and 21 dead shells.

The oysters found on this bank on April 9 last have all disappeared, and the hope then entertained, and indeed until to-day, of a small fishery this year is now vanished.

Lifted the buoys and proceeded in tow of the ss Active, assisted by sail, to the buoy on West Cheval laid out yesterday, where we anchored at 4.30 P.M., when the ss. Active laid out the buoys for guiding the boats to-morrow. After we anchored sent down a diver, who brought up in three dives 17 oysters and 5 dead shells.

Very fine weather to-day for our work, light S.E. and S.S.E. breeze in the morning and fresh sea breeze from west in the afternoon, but hazy over the land.

Wednesday, March 9.

The boats went out at 7 A.M. with orders to the coxswains to bring in only a few oysters, but to note the number obtainable at each dive, and the number of dead shells seen or lifted.

The boats came in again about 1 P.M., when the coxswains showed their diagrams of day's work, from which it appears that they made 130 dives on sand, 103 on rock, and 168 on rock and oysters, averaging 22 to a dive. The oysters lie chiefly on the north side of the ground gone over, and a great many dead shells were found amongst them, some of them broken up in pieces, but most of them bore no trace of injury. They cannot have died of old age, as they are only three and a half years now, and still look young.

Shifted position during the afternoon, one and a half mile to the N.W., and laid buoys out again. After anchoring sent a diver down, who brought up 5 oysters and 8 dead shells, some of them freshly broken up.

The ship's position on to-day's working ground was, shoal buoy bearing S. 26° E., distant 1·64 mile in from 6 to 7¾ fathoms water; the latter depth on the west side.

Fine weather with a strong land wind in the early part of last night.

Thursday, March 10.

The boats went out at 7 A.M. and returned to the ship at 1 P.M., when I ascertained from the coxswains that they had made 82 dives on rock, 97 on sand, and 222 on rock and oysters, averaging 23 to a dive. The oysters were found to extend pretty well all over the ground examined, except on the north, east, and west sides, on the third round, but a good many vacant spaces and dead shells were found, so that I fear the estimate of oysters on the bank, when I come to work it out, will be very much less than last year. Lifted buoys with the exception of quarter-mile west buoy, left down as a mark to return to for lifting sample. Shifted vessel to N.W. and laid buoys out again.

To-day's working position was, shoal buoy S. 23° 30′ E., and Kelaar tower S. 76° E., in from 6 to 7 fathoms water.

After anchoring in our new position, a diver brought up 14 oysters in one dive, and said there were no dead shells.

Fine weather to-day, but very hazy over the land.

Friday, March 11.

The boats went out at 7 A.M. and returned again at 1.30 P.M., when I found that there had been made 202 dives on sand, 65 on rock, and 121 on rock and oysters, averaging 20 to a dive, and a good many dead shells amongst them, but not so many as on the southern part of the bank. The ship was about on the N.W. edge of the oysters, as they were only found to the S. and S.E of her.

To-day's work completes the examination of the west side of Cheval, and it is evident that there are many less oysters on it than were found last year, but I have not yet gone into the figures.

The ss. Active laid out a bamboo buoy on the fishing ground of 1879, to mark it, as we are to-day in a good position for doing so. During the afternoon we lifted buoys, shifted position to the North-East Cheval, and laid the buoys out again; and at our new position a diver brought up 14 oysters at a dive and no dead shells.

To-day's working position was, Kutiramalai beacon S. 33° E., Kelaar beacon S. 72° E., and shoal buoy S. 27° E., distant 4·35 miles; depth of water from 7 to 9¾ fathoms, the latter on the west side.

We have had fine weather, but still very hazy.

Saturday, March 12.

The boats went out at 7 A.M. and returned again at 1.30 P.M., when the coxswains showed that they had made 157 dives on sand, 54 on rock, and 190 on rock and oysters, averaging 40 to a dive, and having very few dead shells amongst them, which is a sign that they are in a more thriving state than

in the west side of the Cheval: indeed the average number to a dive is exactly the same as reported last March on the same ground.

Sent the ss. Active to lay a bamboo buoy on the Peria Paar Karai, three miles to the north-west, as we shall be shifting in a south-east direction away further from it.

During the afternoon lifted buoys, shifted one and a half mile to the south-east, and laid the buoys out again.

The ship's working position to-day was, Arippu tope centre—that is, the bare space between what seems at a distance two topes—N. 72° 30′ E., shoal buoy S. 5° E., distant 4·70 miles; Kutiramalai beacon S. 26° E., in from 6 to 7 fathoms water.

When we shifted to the S.E. a diver brought up in one dive 27 oysters and 2 dead shells.

The weather was fine to-day, but hazy. So far there has been an absence of the strong northerly winds in the afternoon and N.E. wind at night, which generally prevails up to March 12 or 15.

Sunday, March 13.

The boats went about at 7 A.M. with orders to make a quarter-mile round, a boat to be placed to the southward of yesterday's ground after the completion of the usual three rounds, and in consequence of that they did not come in till 3 P.M., when the coxswains reported having made 167 dives on sand, 24 on rock, and 204 on rock and oysters, averaging 48 to a dive, which is three more than the average of last year on the same ground; and to the southward of yesterday's ground they made 93 dives, of which 30 were on oysters, averaging 11 to a dive; but the patch is of small extent, detached from the oysters to the northward and S.W. The oysters of yesterday and to-day are of a fine large quality, and have not diminished in number since last year; but it appears to me at present that they are contained within smaller limits. During the afternoon lifted the buoys, shifted one and a half mile to S.S.E., and laid the buoys out again. In our new position a diver brought up 50 oysters and one dead shell in one dive, but the oysters are smaller than those to the N.W., and on the west side of Cheval. I remarked this also last year, but the oysters on the whole Cheval are of one brood and consequently of one age.

The ship's working position to-day was, Kelaar beacon S. 68° 30′ E., shoal buoy S. 10° W., distant 3·67 miles; Kutiramalai beacon S. 23° 45′ E., from 6 to 6¾ fathoms.

I worked out to-day an estimate of the west side of Cheval as follows:—Area of the bed on which oysters lie, 8,694,355 yards; less area of spots having no oysters, 1,430,525 yards; area of ground actually containing oysters, 7,263,850 yards; number of yards calculated to a dive, 4; number of dives required to fish the bed, 1,815,962; average number of oysters to a dive, 21; total estimated number of oysters on the bed 38,135,202. Thus it would require 100 boats with 10 divers in each, making 50 dives each daily, and each boat bringing in a daily load of 10,500 oysters for 36 days, to fish the bed. My present estimate of oysters is somewhat less than half the number of last year, accounting for the large number of dead shells found; but to account for the dead shells is a more difficult matter. There were some traces found of the ravages of skate, but by far the bulk of the dead shells found bore no traces of external injury. The oysters cannot at this young age—three and a half years—have died of old age, and the real cause must, I presume, remain a mystery.

Monday, March 14.

The boats went out at 7 A.M. and returned at 2 P.M., when the coxswains reported having made 27 dives on sand, 5 on rock, and 321 on rock and oysters, averaging 50 to a dive, which is 4 more than last year. The whole circle of one and a half mile in diameter examined to-day, with the exception of the extreme eastern side, is covered with abundance of oysters in a flourishing condition, as very few dead shells were found; and although the oysters look smaller on to-day's ground, especially about the centre of it, than on the other parts of the Cheval, yet I know them all to be of the one age now—three and a half years.

During the afternoon lifted the buoys, shifted vessel one and a quarter mile to the S.S.W., and laid the buoys out again. The diver here brought up 15 oysters and 7 dead shells in one dive.

The ship's working position to-day was, Kelaar tower S. 74° 30′ E., Kutiramalai tower S. 24° E., Arippu tope centre N. 57° E., and shoal buoy S. 26° W., distant 2·62 miles, in from 6 to 6½ fathoms.

We had fine weather to-day, but southerly winds in the morning, and fresh from W.S.W. in the afternoon.

Tuesday, March 15.

Blowing fresh from the southward this morning with a lump of a sea on, but the boats went out as usual at 7 A.M. They came in again at 2 P.M., when the coxswains reported having made 61 dives on sand, 10 on rock, and 290 on rock and oysters, averaging 30 to a dive (3 more than last year), and very few dead shells amongst them.

Having completed to-day the examination of the Cheval Paar, shifted during the afternoon to the north part of the Mótaragam Paar, and laid the buoys out. The ship's diver brought up 19 oysters and one dead shell after we anchored.

The ship's working position to-day was, Kelaar tower S. 81° E., Kutiramalai tower S. 27° 45 E., and shoal buoy S. 30° W., distant 1½ mile, in from 5¾ to 6½ fathoms water.

The wind this morning moderated about 10 A.M., but went round to W.S.W. then, and continued moderately fresh in that direction all the afternoon.

Wednesday, March 16.

The boats went out at 7 A.M. and returned at 2 P.M., when the coxswains showed their diagrams, from which it appeared that they had made 214 dives on sand, 1 on rock, and 132 on oysters, averaging 24 to a dive, which is about half of the average of last year.

They brought in 64 oysters and 34 dead shells, and found a great many broken up shells, so that it is evident that the oysters are fast disappearing. I doubt if there are now half the number of oysters on the bank that were found last year.

During the afternoon lifted buoys, shifted to the South Mótaragam, and laid buoys out again.

Ship's working position to-day was, Kelaar tower N. 80° E., Kutiramalai tower S. 28° E., and shoal buoy N. 84° 30′ W., distant 1·8 mile, in from 5¼ to 7 fathoms.

We had southerly winds again this morning, and from the westward in the afternoon: there has been an absence of land wind for some days past.

Thursday, March 17.

The boats went out at 7 A.M. and returned again at 1.30 P.M., when it was seen that they had made 266 dives on sand, 10 on rock, and 12 on oysters, averaging 18 to a dive. Not so many dead shells were found as on the northern part, but it seems that the oysters are thinning off this portion of the bank also.

The following is the estimate I have worked out for the North Mótaragam :—Area of bed, 1,262,500 yards, less 50,500 yards, being 4 per cent. of blank space, 1,212,000 yards actual area of oysters; 404,000, the number of dives required, at 3 yards to the dive, 24 oysters on the average to a dive and 9,696,000 the number of oysters on the bed, which is 15,720,650 less than last years estimate, showing that in a short time there would not be an oyster left on the bank, and that it is necessary to fish it now ; and, with that view, I sent the ss. Active off to Mannár at 3 P.M. with the following telegram to the Government Agent, Jaffna :—"Mótaragam oysters fast disappearing ; must be fished now—else lost ; 7,000,000 now on bank, or fifteen days' fishing for fifty boats ; oysters probably worth Rs. 10 a thousand ; will lift sample 10,000 to-morrow. Can you come with boats and divers? Shall I send Joakim to Keelakarai for thirty boats and divers? Recommend oysters being sold in one or two lots when bank fished, and divers get third-share proceeds. Shall I tell Adigar to make a kottoo to hold all oysters, or separate kottoos for 1,000,000 each ? ss Active waits answer at Mannár."

During the afternoon lifted buoys and shifted to the North Mótaragam, ready for lifting a sample to-morrow.

To-day's working position was, Kelaar tower N. 78° 45′ E., Kutiramalai tower S. 26° 40′ E., and shoal buoy N. 55° W., distant 3·37 miles in from 5 to 6 fathoms water.

We had fine weather to-day with south-east breeze in the morning and westerly in the afternoon.

Friday, March 18.

The boats went out this morning at 7.30 with orders to go about quarter of a mile to the west of ship, spread themselves out about 100 fathoms apart, and lift up 2,500 oysters each, and to count the oysters at each dive ; also to note the number of square yards reported by the divers as the space from which they got the oysters at each dive, so as to give me a more correct estimate of the bed. The boats all came in at 11 A.M., when it was found that they had lifted 10,550 oysters and 1,061 dead shells, besides a quantity of broken shells in 309 dives, giving an average of 34 oysters and 2½ yards to a dive, 10 per cent. of dead shells, or at least 12 per cent. including the broken up shells.

The ss. Active returned about noon, bringing an answer from Mr. Twynam to my telegram, in which he states that he is coming down with as many boats and divers as he can get without delay, and telling me to send Joakim for divers.

At 1 P.M. got under weigh in tow of the ss. Active for the North-West Cheval, leaving a bamboo buoy with blue pendant in the spot where we were at anchor on Mótaragam. Anchored at 2.30 about quarter of a mile S.S.E. of the buoy left down on the 10th instant as a mark for lifting sample of oysters.

After anchoring sent the ss. Active on shore with a letter to the Adigar about preparing kottoos, and then go on to south bar to wait for Mr. Twynam. Sent coxswain Joakim also to go on from Vaṇkálai to Keelakarai for boats and divers.

We had fine weather to-day: fresh N.E land wind last night, and sea breeze to-day.

The following is my estimate for the east side of Cheval Paar. The bank may be divided into the North-East Cheval and East Cheval for convenience ; and on the north-east the area of bed of oysters is 5,831,875 yards, less 15 per cent. blank space, 874,781, yards ; area of oysters, 4,957,094 yards ; number of dives, at 3 yards to a dive, 1,652,364 ; average number of oysters to a dive, 45 ; number of oysters on bed, 74,356,380 ; which would give thirty-three days' fishing for 100 boats with daily loads of 22,500 oysters per boat. On East Cheval the area of the bed of oysters is 9,583,750 yards, less five per cent. blank space, 479,181 yards ; area of oysters, 9,104,563 yards ; number of dives, at 3 yards to a dive, 3,034,854 ; average number of oysters to a dive, 40 ; number of oysters on the bed, 121,394,160 ; which would give sixty days' fishing for 100 boats with average daily loads of 20,000 oysters per boat.

The total number of oysters on the whole Cheval is estimated at 233,835,742, or equal to 129 days' fishing for 100 boats. The oysters are all of the same age, three and a half years, though they are of largest size on the north-east part. They are dying off fast on the west side. It would be advisable to lift a sample from the three parts, viz., west side, east side, and north-east side, so as to be able to determine the future course of action as regards the fishing of the bank.

Saturday, March 19.

The boats were sent out this morning at 7 o'clock with orders to pull in the direction of Kutiramalai : No. 1 boat for quarter of a mile, No. 2 boat half a mile, No. 3 boat three-quarters of a mile, and No. 4 boat one mile, and three to lift a sample of 2,500 oysters each, keeping a record of the dives, number of oysters to each, and space lifted from. They seemed to go pretty well as directed, and at 1.30 they all came in again, when the oysters were counted and put into sacks. 10,510 oysters and 512 dead shells were lifted in 322 dives off 512 yards, as estimated by the divers, which gives an average of nearly 33 oysters and 1·6 yards to a dive, with 6 per cent. of dead shells.

The ship's position was shoal buoy S. 28° E., distant 3·05 miles, and Arippu tope centre N. 65° E., in 6 fathoms water.

Shortly after noon, when the sea breeze set in, we got underweigh for Silávatturai, where we anchored at 4 P.M.

Sunday, March 20.

This morning landed the two samples of oysters, and had them put away in two ballams in a small kottoo, which the Adigar had prepared for them.

Monday, March 21.

Got underweigh at 4 A.M. with a light easterly breeze to run out to the North-East Cheval to lift a sample of oysters from it. At 10 A.M. the wind got very light and variable, and about 11 a sharp squall with a little rain came out from the eastward. At noon anchored about half a mile to the eastward of the buoy left down on the 12th instant, and shortly after it began to blow fresh from the N.E., and a choppy sea got up so quickly that the boats were unable to go out. During the afternoon the wind veered round to the northward and blew fresh, going back to the N.E. after dark.

Tuesday, March 22.

Blowing fresh all night from the N.E. until about 3 A.M., when it came out from the W.N.W. with heavy rain, and at daylight there was quite a lump of a sea on, blowing fresh from W.N.W., and thick rainy weather with a good deal of thunder and lightning—very unusual weather for this season of the year, and somewhat of a cyclonic nature.

About 9 A.M. the rain cleared up, and then the boats went out to lift a sample of oysters, returning with it about 1 P.M. They lifted 10,253 oysters and 350 dead shells off 424 yards in 303 dives, giving an average of 34 oysters and about 1½ yard to a dive, and 3½ per cent. of dead shells. The average number of oysters to a dive obtained to-day is, contrary to the lifting of the sample from Mótaragam and North West Cheval, less than the average reported at the inspection.

During the afternoon shifted to the East Cheval, dropped a buoy about the centre of it on the ship's position on the 14th, and then anchored on the eastern side of the oysters.

The westerly breeze kept up all day, but the sea went down in the afternoon. I hope they have had a similar heavy fall of rain at Silávatturai to what we have had, as it will do a great deal of good, the water in the big tank being very low. I remarked when I first came up, that if we had been fishing this year the people attending the fishery would have been very short of water.

Wednesday, March 23.

This morning the boats went out to lift the sample at 7 o'clock from near the buoy placed yesterday. The ss. Active came out early this morning, reporting that she had returned to Silávatturai from the south bar last evening, as Mr. Twynam had sent word that he was not coming down immediately.

The boats came in with the sample at 9 A.M.: they lifted 10,700 oysters and 95 dead shells in 160 dives from 209 yards of space, which gives an average of 67 oysters and 1½ yard to a dive, with less than 1 per cent. of dead shells. The average of oysters thus obtained is 17 more than the divers reported when the boats were making their rounds on the 14th.

At 10 A.M. sent the ss. Active with the boats in tow to buoy off the Mótaragam Paar, after doing which they returned to the ship shortly after noon, and then we got under weigh for Silávatturai, where we anchored at 3.30 P.M.

I went on shore and found that the Adigar had made good progress with the erection of the kottoos.

Strong westerly breeze in the afternoon, with a rain squall off the land in the evening, and drizzling rain with a S.E. wind up to 10 P.M.

No dhonies or divers arrived as yet.

Thursday, March 24.

This morning we landed the two samples of oysters from East Cheval and North-East Cheval, and had them put away carefully in two ballams in a small kottoo erected near the one containing the sample from the Cheval and Mótaragam.

No boats or divers arrived yet, but some of the fishery officers have come.

The weather is more settled, and seems to have set in fine.

Friday, March 25.

Fine weather all day with the land and sea breeze of a northerly tendency. Some more fishery officers have arrived. Several dhonies and twenty-two divers have also arrived.

The Adigar is pushing on rapidly with the buildings required, and there is a large gang of scavengers employed cleaning up the place.

Directed one of the inspection boats to go out to-night to the Mótaragam, stop there till noon to-morrow, and then run in, and one of the boats to do that every night till the ship goes out.

Saturday, March 26.

Fine weather to-day, but the land and sea breeze had a southerly tendency.

Received a telegram from the Government Agent, asking me when I intended washing the sample, to which I replied, on the morning of the 28th.

Sunday, March 27.

This morning at daylight the wind was from S.S.E.

Joakim coxswain sent a message that 500 divers and 40 boats would start from Paumben at once, and that I might except them here to-morrow.

The wind went round to S.W. about noon, and blew fresh all day from that quarter.

This evening five Tuticorin boats with 70 divers arrived. Joakim coxswain also arrived, and said that 60 Keelakarai boats and divers had started and would be here to-night or to-morrow.

Monday, March 28.

Washed the Mótaragam sample this morning, and had the refuse containing the pearls drying all day in the sun.

Blowing fresh all day from the south-west, which will detain the fishing boats on their way; but some of the Keelakarai boats managed to turn up.

Sent the ss. Active away in the morning to bring down the boats with olas detained at the south bar, Mannár.

Tuesday, March 29.

Mr. Twynam came on board early this morning, having come down from Mannár during the night in a cart, and told me that he had a very uncomfortable journey from Sanna in a kullah, contending against a strong south-west wind. Went on shore with him shortly after he came on board, and attended to the drying and picking of the sample.

South-west wind still continues blowing fresh. The ss. Active returned in the evening and reported that the boats with the olas were hauled up on the beach, and refused to launch again with this wind. Two of the boats had swamped, and the olas they contained were lost.

Told the engine driver to return to the south bar to-morrow morning and bring down as many boats as he could tow, as we heard that a great many boats were wind-bound at Mannár; some boats, however, arrived to-day.

Wednesday, March 30.

Washed the sample oysters from the North-West Cheval this morning.

The boats that have arrived were numbered to-day, and they were told to prepare for going out to the bank to-morrow night.

The ss. Active did not turn up with any boats to-day, and the thatching of the temporary buildings for the quarters of the fishery establishment is stopped for want of cadjans and olas.

South-west wind continued all day, but in the evening there was a change to the south-east, which is a sign that the south-west wind is done, or nearly so.

Activity was displayed all day amongst the traders in getting up their kottoos.

Thursday, March 31.

Washed the sample oysters from the North-East Cheval this morning.

There was a fine south-east wind this morning, but about 8 o'clock it went round to the south-west again.

The ss. Active turned up in the afternoon with about twenty boats in tow, and by the evening there were seventy boats in all arrived.

There was a divided opinion amongst the divers as to the utility of going out to the bank to-night, but the fact is that most of them are not ready yet to go out. It is hoped, however, that they will be able to make a fair start to-morrow.

The engine driver of the ss. Active was told to go back to the south bar early to-morrow morning and bring the remainder of the ola boats, but not to stop there later than noon, and then to return if the boats were not ready.

The wind came out from the south-east this evening, and it really looks as if the south-west wind were over.

Friday, April 1.

This morning the wind was from the S.E., and towards the middle of the day it worked round by S. to S.W. by W., and assumed more of the appearance of a sea breeze than a south-western. A number of boats arrived in the afternoon, and the ss. Active returned with five boats in tow. A committee of three pearl traders valued the sample pearls of the Mótaragam, North-West Cheval, and North-East Cheval, but were unable to give in their valuation statement to-day.

Arrangements were made for all the boats now here to start out to the bank to-night following the guard vessel, and even up to the time of the boats shoving off from the shore more boats were arriving, and expressed their wish to go out to the bank, which Mr. Twynam sanctioned.

Saturday, April 2.

Shortly after midnight last night, accompanied by Mr. Twynam, we started for the Mótaragam Paar in tow of the ss. Active, steering S.S.W. for three miles and then W.S.W. for eight miles. The driver of the ss. Active was instructed to put over the cherub log on starting, and to inform me when the distances were run off. At 3.30 A.M. we anchored to wait for daylight to see the buoys and take up position; but at daylight found out that we had overrun our distance and were about two miles to the S.W. of the buoys; so we got underweigh and were towed back into position. The boats were nearly all at anchor around us at daylight, and they also lifted anchor and followed us, and by 7.30 A.M. all the boats, 90 in number, were at work diving. Shortly after we got into position, the ss. Serendib hove in sight, and anchored near us about 8 A.M. She brought some stores for the fishery, a mast-head light for the guard vessel, 15 tons of coal for the ss. Active, and some passengers for Silávatturai—Mr. A. M. Ferguson of the *Observer*, Lieut. Thorburn of the 91st Regiment, Mr. Siedle, and 41 natives. The ss. Serendib remained at anchor near us till the boats started for the shore, which they did about 1 P.M., and then she got under weigh and ran in towards Silávatturai anchoring outside of the reef, when all the party, including myself, landed, and in the course of the evening visited the kottoo, and saw the oyster sale, which went off very well, considering that the valuation of the sample was only Rs. 9 per thousand. The whole of the day's fishing, over 800,000 oysters Government share, were sold before 8 P.M., realising about Rs. 18,000.

Sunday, April 3.

Last night shortly after midnight I went off to the ss. Serendib in her steam launch with Captain Robson, and on arrival on board she got under weigh and dropped me at the guard vessel about 3 A.M., and then she proceeded to Paumben.

At daylight there were 102 boats on the bank, and they were all at work diving by 7 A.M., and at 1 P.M. they were started for the shore with average loads of about 10,000 oysters, as near as I could make out.

Mr. Twynam came out in the ss. Active at 10.30 A.M., and left again after the boats.

We had beautiful fishing weather to-day—light easterly winds all morning, calm in the middle of the day, and a nice sea breeze from W.N.W. in the afternoon until 5 P.M., when a squall with some rain came out off the land.

Monday, April 4.

Found a fleet of boats at anchor all round the ship at daylight, and by 7 A.M. they were all at work diving. Counted 114 boats out to-day. The B. I. steam launch of Tuticorin stopped at the guard vessel about 8 A.M. on her way from Tuticorin to Silávatturai with 29 merchants from various parts of India on board for the fishery. I was told that they paid Rs. 20 each for their passage. The steam launch was passing the bank without intending to stop, but I sent a boat to tell the people on board that they might go round the boats and see the diving if they liked, which they did.

Mr. Twynam came on board with Mr. A. M. Ferguson at noon, when Mr. Twynam informed me that yesterday's Government share of oysters amounted to 913,169, which sold at Rs. 15 per thousand, realising Rs. 13,697·54, so that the boatloads had turned out better than I expected.

The boats started for the shore about 0.30 P.M. with loads similar to those of yesterday, as near as I could make out.

Mr. Twynam and Mr. Ferguson left in the ss. Active at 2.20 P.M.

Very fine weather again to-day, light land wind all morning, calm in midday, and a nice westerly sea breeze in the afternoon.

Tuesday, April 5.

Found the boats at anchor all round the vessel at daylight this morning, and by 7 A.M. they were all at work diving. Counted 116 of them. Mr. Twynam sent me by one of the coxswains a memorandum of yesterday's sale as follows:—854,983 oysters, Government share, sold at from Rs.16 to Rs.19 per thousand, realising a total of Rs. 15,097·69. Mr. Twynam and Mr. Harvey came out in the ss. Active at 11 A.M.

At noon sent the coxswains out to take the number of oysters fished up in each boat, so as to let them away earlier than usual on account of a squall making up over the land.

The boats started at 0.30 P.M. with loads somewhat short of yesterday's apparently, and with a nice N.W. breeze, but they were caught by a squall off the land when they had got about two miles on their way, and they were noticed to anchor.

Mr. Twynam started in the ss. Active for the shore at 2 P.M., and I observed that he picked up about 20 boats on his way, and took them in tow; but shortly after a nice N.W. breeze sprung up, and I should think all the boats would reach the shore before 5 P.M., about which time the breeze sprang up fresh and veered round to N.N.W. and N., and continued that way until 10 P.M. with heavy clouds and lightning to the S.E.

To-day there was an Arab, who had come from Tuticorin, where he was working at a wreck, diving with helmet, dress, and air-pump, in a boat by himself and attendants, but he only succeeded in getting up 1,500 oysters—very little more than some of the divers working without dress obtained—and the Arab is reputed to be a first-class diver. This agrees pretty well with the results obtained by the European divers I obtained from the Breakwater Works when fishing the Chilaw Paar in April, 1884, but the Arab's work is rather in excess of that done by the Breakwater divers.

Wednesday, April 6.

The boats, 114 in number, arrived on the bank about 1 A.M. in consequence of a fresh N.E. breeze. At daylight there was a chilly wind and dull cloudy weather, and in consequence of the cold the divers did not get to work till about 9 A.M.; so there will be a poor day's work.

Received by one of the coxswains a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 680,540, sold at from Rs. 19 to Rs. 22 per thousand, and realised a total of Rs. 13,394·30. Mr. Twynam came out in the ss. Active at 11.30 A.M.

The boats were not started off till 1.30 P.M. in consequence of beginning late; their loads appear to be less than yesterday. There was a light sea breeze when they started, but they were soon headed by a squall off the land, when Mr. Twynam started and took as many as possible in tow of the ss. Active. I saw that he had great trouble and delay in getting started with them in tow, as they appeared to all pull up to the ss. Active to be towed in at once, which she is not capable of doing. About twenty boats is as many as she could tow at a time with moderate speed. About 4 P.M. the breeze sprang up from the E.S.E., and the boats, many of which were then at anchor a mile or so to the eastward of the guard vessel, made sail, and by 6 P.M. were well in towards Silávatturai.

The weather last night and this morning was something of a cyclonic nature, and I shall not be surprised to hear of bad weather to the southward.

Thursday, April 7.

The boats, 108 in number, were all out on the bank by 3.30 A.M., with a fine easterly breeze blowing, and by 7 A.M. they were all at work diving. Fine clear weather and nice E.N.E. breeze.

Received a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 569,785, and that they sold at from Rs. 17 to Rs. 19 per thousand, realising a total of Rs. 10,270·65.

The coxswains informed me that the last of the boats got in last evening about 7 o'clock.

Mr. Twynam came out in the ss. Active at noon.

The boats had all started for the shore by 1 P.M. with a nice N.W. breeze, and with loads a little in excess of yeterday's, I think. The divers are calling out that the bank is exhausted, but I think there is another day's fishing on it yet.

About an hour after the boats had started a squall made up over the land, and I was afraid that it would break over the boats, and head them before they got in, but it seemed to split and disperse.

Mr. Twynam left for the shore in the ss. Active at 2.30 P.M.

The wind came out from E.S.E. about 4 P.M. in a squall, and remained in that direction all the rest of the evening, with heavy rain clouds and much lightning to the S.E. and S.

Friday, April 8.

The boats, 88 in number, were all out by 4 A.M., and had commenced diving by 7 A.M. Fine clear morning with a light E.S.E. breeze. The Tuticorin boats and Roman Catholic divers are not out to-day in consequence of its being Good Friday. Received a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 547,655, that they sold at from Rs. 17½ to Rs. 19½ per thousand, and realised a total of Rs. 9,863·62.

Mr. Twynam came out in the ss. Active at 11 A.M. and left for the shore again at 3 P.M.

The boats were started off for the shore at 1 P.M. with loads apparently rather in excess of yesterday's, and with a nice sea breeze from W.N.W. to take them in. As the boats passed under the stern of the guard vessel, most of the divers shouted out for a holiday, saying that they were tired, and that their fingers were sore. We promised them Sunday as a holiday, if they would all come out to-morrow and clean up the bank, which they agreed to.

At 4 P.M. a heavy squall came off the land from N.E., but very little rain with it. Another squall came out from the S.E at 6 P.M., and the weather for the remainder of the evening was cloudy, with heavy lightning to the southward.

Saturday, April 9.

The boats, 115 in number, were all out on the bank before daylight, and were at work diving by 7 A.M. Weather fine, with a light E.S.E. breeze and smooth sea.

Received a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 624,785, sold at from Rs. 18½ to Rs. 23 per thousand, realising Rs. 11,925·02.

Mr. Twynam came out in the ss. Active at 11.30 A.M.

The boats were started for the shore at 1 P.M. with fairly good boats, and after they had cleared off the bank the ss. Active took the guard ship in tow for the North-East Cheval, where we anchored at 4 P.M. We could no doubt have got more oysters off the Mótaragam, very probably to the extent of my estimate of 9,696,000, if the boats had been kept on it a few days more scraping it up; but the divers were tired of it, and I consider it advisable to get on to the North-East Cheval before another spell of S.W. winds sets in, which it might do any day now, as I believe the boats would manage to get out to it even with a S.W. wind, when they would be unable to reach the Mótaragam, and thus we may be enabled to have a longer fishing.

A heavy squall came out from the N.E. just as we anchored.

As the boats are not coming out to-morrow, I went on shore with Mr. Twynam and landed at the kottoo at 6.30 P.M., and shortly afterwards Mr. Twynam sold all the day's fishing of oysters.

Sunday, April 10.

Remained on shore all day, and found Silávatturai very full of people, and private kottoos still being run up.

There was a heavy squall off the land in the afternoon, with a good deal of rain, thunder, and lightning.

I was informed that the Mótaragam Paar has yielded a total of 8,434,330 oysters, the Government two-thirds share of which sold for Rs. 103,664.

The boats started out for the banks about 11 P.M. with a light land wind.

Monday, April 11.

I left in the ss. Active along with Mr. Twynam at 8.30 A.M. and got out to the guardship at 10, and found the boats, 116 in number, all at work around the ship getting good loads.

The boats started for the shore at 12.30 P.M. with a light W.S.W. sea breeze and good loads of oysters.

The ss. Active buoyed off the bank after the boats had started, and at 4 P.M. Mr. Twynam left for the shore, at which time there was a heavy-looking squall making up over the land; but it was kept back by the S.W. sea breeze until 6.30 P.M., when it came out from the S.E; but there was very little wind with it.

During the rest of the night the wind kept in the S.E. and S.S.E., with cloudy weather.

Tuesday, April 12.

At 4 A.M. the boats were just arriving on the bank; wind light, and from the south, so that we have just mooved to the North-East Cheval in time, as I doubt if the boats could have fetched the Mótaragam this morning. 117 boats are out this morning, and they were all at work by 7 A.M.

Received by one of the Government boats a memorandum from Mr. Twynam, informing me that yesterday's Government share of oysters came to 1,265,010, sold at from Rs. 20 to Rs. 24 per thousand, and realised Rs. 25,925·21, which is the largest haul we have yet had in one day.

The sample taken off this bank has been valued at Rs. 11·14 per thousand.

I have forgotten to remark in the proper place that when lifting the buoys on the Mótaragam Paar I found on the coir rope mooring of a bamboo buoy a number of oyster spat of the kind called false spat by Mr. Thomas of Madras, but none were found on the bamboo itself, or on the chain moorings of the other buoys, so that it would appear that coir rope or string is the best thing for collecting spat upon.

Mr. Twynam arrived in the ss. Active at noon and left again at 3 P.M.

The boats were started for the shore at 1 P.M. with good loads, but not so large as those of yesterday.

There was a nice sea breeze to-day from W.S.W., but at sunset it worked round to the S. and S.S.E., and remained in that direction all night with dark clouds to the southward.

Wednesday, April 13.

The boats, 116 in number, were all around the ship before daylight this morning, and commenced work about 7 o'clock. Light southerly wind blowing.

Received a memorandum from Mr. Twynam, informing me that yesterday's Government share of oysters came to 898,295, sold at from Rs. 19½ to 20½ per thousand, realising a total of Rs. 17 654·75.

An Arab diver from the Persian Gulf working with the Tuticorin divers, who came to the guardship this morning, told me that he brought up himself yesterday 3,000 oysters. I sent him down alongside to see how long he could remain under water, and I timed him one minute and forty-nine seconds, which is the longest dive I have ever known. He uses a horn nipper on his nose, and probably that gives him an advantage over the local divers, who do not use such a thing. This is not the same diver referred to in diary of the 5th, who is now working without the dress, finding he can do better without it.

The boats complained about 9 A.M of there being no oysters, and all went to the north-east side of the ship. I sent two of the Government boats with divers to examine the ground to the S.S.W., W., N.W., and N. of the ship, and found that there are no oysters of any consequence in those directions, except near the ship and to the S.W. of the north buoy, where there appears to be a small patch.

Mr. Twynam came out at noon and left again at 3.30 P.M.

The boats were started off for the shore at 1 P.M. with apparently loads similar to those of yesterday, and with a nice W.S.W. sea breeze to take them in.

The ss. Active was sent to-day to lift the bamboo buoy laid out on the Periya Paar Karai on March 12, as there is now no chance of examining that bank; and a diver was sent with her to see what there was to be found at the buoy, and seven young oysters, about one year, were found on rocky bottom, so that it would seem as if the young oysters of three months found there in March, 1886, were still on the ground. I shall have to inspect the bank the first opportunity after this. Oyster spat were also found in the coir rope mooring of the bamboo, but not on the bamboo itself. The spat found has the spikes which Mr. Thomas of Madras declares is the true indication of the true spat; but it occurs to me that in some spat, as in some older oysters, these spikes are or may not be much developed.

I was afraid this morning that we were going to have a spell of south-west winds, as there was rather an uncomfortable swell on from that direction, but it went down very much by the evening; and at 8 A.M. a fresh easterly breeze sprung up.

Thursday, April 14.

The boats, 115 in number, were all out early this morning with a fresh E.S.E. breeze; but at daylight they were found to be very much scattered about, and it was 7.30, or nearly 8 o'clock before they were all at work.

At daylight found the Madras Government ss. Margaret Northcote at anchor near the guard-ship, and shortly afterwards Captain Phipps, the Master Attendant at Tuticorin, came on board and told me that he had come over to see our fishery, and would remain here a few days.

Received a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 968,525, sold at from Rs. 19½ to Rs. 22 per thousand, and realised Rs. 19,485·26.

Mr. Twynam came out in the ss. Active at 0.30 P.M. and left again with Captain Phipps at 4 P.M.

The boats left for the shore at 1 P.M. with a light W.S.W. breeze, and with good loads of oysters.

At sunset there were heavy clouds over the land with vivid lightning, but the land wind did not spring up till 8 P.M., when it came out fresh from S.E., and remained fresh all night with dark clouds about.

Friday, April 15.

This morning at daylight there was a fresh land breeze from E.S.E., and cloudy. The boats were scattered about in all directions, and a long way off the ship, and some of them did not get on the bank till 8 o'clock. The coxswains, when they arrived, told me that it was with great difficulty the boats were got to start last night, in consequence of the cloudy weather and slight rain falling; but we had no rain at the ship.

Received a memorandum from Mr. Twynam informing me that yesterday's Government share of oysters came to 1,144,400, sold at from Rs. 21 to Rs. 22½ per thousand, and realised Rs. 24,566·80.

There are 115 boats out to-day.

Mr. Twynam and Captain Phipps came out in the ss. Active at noon.

The boats left for the shore at 1 P.M. with very large loads of oysters, and with a light W.S.W. sea breeze.

After the boats left, the ss. Active laid out buoys one mile to the S.E., and the coxswains were instructed not to allow any boats to fish to-morrow to the S.E. of those buoys, as I find they have a tendency to spread further every day to the S.E., without properly cleaning up the ground they have gone over previously. After the ss. Active had laid out the buoys she took the guard-ship in tow and shifted her position half a mile to the S.E.

Mr. Twynam and Captain Phipps left for the shore in the ss. Active at 3 P.M., just as a squall was making up in the N.E., and which had then caught the boats about half way to the shore, and broke them off to the S.E. Some of them I observed anchored, and others stood on to the S.E. I observed that the ss. Active on her way in picked up some of the boats that got to leeward and towed them in. After the squall passed over the sea breeze sprung up again, on which the boats that had anchored made sail, and all of them had got in apparently by 6 P.M. The land wind sprung up fresh from N.E., about 8 P.M., but veered round to S.E. during the night.

Saturday, April 16.

At daylight there was a light breeze from the south. Some boats were at anchor on the bank but most of them were under sail a long way off towards the land, and it was 9.30 A.M. before the last of them got out to the bank.

The coxswains say that all the boats did not get in till 7 P.M. yesterday; that they started out again at midnight, but had a very light wind, which is rather curious, as I was on deck at 2 A.M., and there was a nice breeze from S.E. blowing then.

Received a memorandum from Mr. Twynam informing me that the Government share of yesterday's fishing came to 1,533,445 oysters, sold at from Rs. 23½ to Rs. 24½ per thousand, realising over Rs. 36,000—a splendid day's haul; and that they did not finish counting oysters in the Government kottoo till 4 o'clock in the morning.

There are 116 boats out to-day, but it is difficult to prevent them from going to the S.E. of the demarkation buoys; and I cannot believe that the ground to the N.W. of them has been properly cleared up yet.

Mr. Twynam and Captain Phipps came out at noon.

The boats were started for the shore at 1 P.M. with a nice S.W. breeze to take them in, and loads apparently as large as yesterday, but the coxswains say that the oysters lifted to-day are smaller.

Mr. Twynam having decided to give the divers a day's rest to-morrow, which they earnestly requested, I went on shore with him and Captain Phipps, starting at 4.20 P.M. from the ship, and arriving on shore at 6, when we had complaints of the oysters landed to-day being young. Mr. Twynam went to the sale room, and by 7 P.M. had disposed of all the oysters at from Rs. 14½ to Rs. 15½.

Sunday, April 17.

I went round the kottoo this morning and saw a large percentage of young oysters amongst yesterday's fishing. Afterwards I went round the place and saw the divers and boatmen enjoying their holiday, and some of them showed me their fingers, where they were chafed at the tips by pulling up the oysters.

Yesterday's Government share of oysters came to 1,595,135, and realised Rs. 23,854·60. The boats started out for the bank about 10 P.M. There was a squall off the land this afternoon about 4 o'clock, but no rain.

Monday, April 18.

I went out to the bank with Mr. Twynam and Captain Phipps, leaving the shore at 8.25 A.M., and arriving at guardship at 10, where we found the boats, 116 in number, working between the ship and the demarkation buoys laid out on the 15th, and some of them to the S.E. of the buoys. The coxswains had examined the ground about the ship as I had instructed them, and I found that there are very few oysters remaining, except just near the ship, and that the divers have pretty well lifted everything. I

therefore shifted the vessel about a mile to the S.E., and anchored near the position I was in on March 13, a little to the N.W. of it.

The boats were started for the shore at 1.30 P.M. with a nice W.S.W. breeze and pretty good loads, but not so large on the average apparently as on Saturday.

Mr. Twynam and Captain Phipps started for the shore in the ss. Active at 4 P.M.

There was no regular land wind this evening, the sea breeze merely veered round to the southward.

Tuesday, April 19.

At daylight this morning the wind was blowing fresh from the southward, with an uncomfortable S.W. swell on.

The boats, although they had been told by the coxswains to anchor to the N.W. of the ship, were all to the S.E. of her. The coxswains were sent out to get them shifted, but finding they would not obey the coxswains, I had to go out amongst them myself, and even then I had the greatest trouble to get them to obey orders, and some of them would not lift their anchor until I threatened them with cutting their cable, and made it appear that I intended to carry out my threat. I have noted the numbers of the boats that would not move, and I shall request Mr. Twynam to inflict some punishment on them, such as confiscating a portion of their share of oysters.

Two of the boats being far to leeward ran back to the shore, the wind having gone back to S.W. about 8 o'clock, and two of the boats having a diver sick, vomiting and purging, got under weigh and ran for the shore after having been at work about an hour.

Received a memorandum from Mr. Twynam of yesterday's fishing. Government share of oysters came to 1,309,715, sold at Rs. 16 and Rs. 17 per thousand, realising Rs. 21,455·80. Mr. Twynam and Captain Phipps came out in the ss. Active at 11.30 A.M., and at noon Captain Phipps went on to Paumben in the ss. Margaret Northcote, which had followed the ss. Active out.

There were 108 boats at work to-day, and at 1 P.M. they were started for the shore with apparently smaller loads than yesterday, in consequence, I presume, of the S.W. sea that prevailed all day, rendering it very hard and difficult work to dive with the boats tossing about as they were.

Mr. Twynam left for the shore at 3.30 P.M.

The wind kept from S.W. to S.W. by S. all day, but in the afternoon the clouds banked up over the land as if we were going to have a land wind to-night, but although there was vivid lightning in the east, and the clouds spread out seaward about 7 P.M., yet the wind did not go round to the east of south all night.

Wednesday, April 20.

Fresh southerly breeze this morning and a lump of a S.W. swell on.

The boats were mostly around the ship at daylight, and diving commenced at 7 o'clock, but some three or four boats did not get out to the bank till 8.30.

Received a memorandum from Mr. Twynam informing me that the price of oysters went up again yesterday from Rs. 20½ to Rs. 25 per thousand The Government share of yesterday's fishing came to 1,751,000 oysters, and realised Rs. 25,449·29.

Joakim coxswain informed me to-day that the bazaar price or value of pearls is now Rs. 70 per kalengey, taking them all round, mixed with all sorts; that is to say, if the washing of 10,000 oysters produced fine kalengeys of pearls in all, they would be worth Rs. 70 per kalengey. In 1879 the price was Rs. 35 per kalengey, so that the value has just doubled since then, which accounts for the large prices now obtained for such young oysters

Mr. Twynam came out in the ss. Active at 11.30 A.M. and left for the shore again at 4 P.M.

The boats were started for the shore at 1 P.M. with loads somewhat similar to those of yesterday, and a fresh S.W. by S. breeze to take them in.

There were 108 boats employed fishing to-day. I had to-day also great trouble in keeping the boats from passing to the S.E. of the ship and line of buoys. I told the coxswains that if the boats going beyond the line would not shift back again to cut their cables, as orders must be obeyed, otherwise there would be no getting the bank properly fished. One boat was served in this way, and it had the effect of instantly driving all beyond the line back into position, with the exception of five, who would persist in going beyond the line. I have given the numbers of those five to Mr. Twynam, who has promised to fine them.

The wind kept from S.S.W. to S.W. by S. all day with a S.W. sea on, which however went down a bit in the afternoon.

There was a magnificent display of lightning from a bank of clouds in the east from 6 to 7 P.M., and although the clouds spread out to the N.W., the wind did not go round to the eastward of S. by E.

Thursday, April 21.

The boats were out around the ship before daylight this morning, with the exception of a few which were under sail standing out, and which arrived about 7 A.M., about which time fishing generally commenced.

There are 110 boats out to-day, but there is a nasty S.W. sea on, and a fresh S.S.W. breeze, which will, I fear, impede fishing operations. There is a general complaint also of a scarcity of oysters on the N.W. side of the ship, so that I do not expect large loads to be obtained to-day. Mr. Twynam came out in the ss. Active at 1 P.M., and left again at 4 P.M. The boats were started for the shore at 1.30 P.M. with better loads than I expected.

The wind kept up fresh all day from S.W. to S.S.W. with an uneasy sea on, but it went down a little in the afternoon and the wind also, but sprung up again after dark.

Friday, April 22.

At daylight this morning it was blowing fresh from S.W. with a lump of a sea on; no boats out, but I saw four or five under sail a long way off under the land; and by 10.30 P.M., three boats, Nos. 36, 20, and 41, had reached the bank, working tack and tack to windward. I allowed them to work on new ground to the S.E. of the ship in consequence of being so late; but 36 went to the N.W. of the ship. No. 64 did not reach the bank till noon, and went on the N.W. side of the ship also; I allowed them to work till 2 P.M., when they were started for the share with 43,000 oysters amongst them. Two of the Government boats came out also about 11 A.M., and went in again with the other boats.

The wind fell quite light about 10 A.M., and the sea went down very much by noon, and it remained fine all the afternoon.

Saturday, April 23.

At daylight this morning it was blowing fresh from S.W. by S. and a lump of a sea on. About 60 boats were at anchor near the ship, and a number scattered about in shore and to leeward of the ship. By 9 A.M. there were 94 boats at work diving. Some boats still to leeward, and I fear they won't be able to get up to-day. The coxswains tell me that there was a land wind in shore last night, and the boats started out with it, but caught the S.S.W. wind as they neared the ship.

Mr. Twynam came out in the ss. Active at noon, and brought with him two or three boats that he found to leeward.

One boat, No. 59, started away for the shore at 11 A.M. with a load of 20,000 oysters, saying his boat would not hold any more in this sea.

All the boats were started off at 1 P.M. with very good loads, especially those that were working to the S.S.E. of the ship, and a fine S.S.W. breeze to take them in.

Mr. Twynam left for the shore in the ss. Active at 4 P.M., arranging to send the boats out again to-night if the wind should be favourable, as the divers had a day's rest yesterday.

The wind and sea went down very much in the afternoon, and at 5.30 P.M. thunder was heard once over the land, which looks well for a change of the S.S.W. wind we have been having the last few days. At 8 P.M. the wind had gone round to south.

Sunday, April 24.

At daylight this morning there was a fresh breeze from S.E. and a heavy S.W. swell on, which caused the ship to roll about a good deal. The boats, 110 in number, were at anchor around the ship, and by 7.30 diving generally had commenced, the boats all working on the south side of the ship, and to the northward of the line of demarkation buoys, which were laid out by the ss. Active yesterday afternoon.

Received a memorandun from Mr. Twynam informing me that the Government share of oysters on the 21st came to 1,079,805, and realised Rs. 21,786; on the 22nd 50,370 oysters, realising Rs. 1,052·59; and yesterday 1,190,500 oysters, realising Rs. 23,114.

Mr. Twynam came out in the ss. Active at 10.30 A.M. and went ashore again at 3 P.M.

The boats were started for the shore at 1 P.M. with good loads of oysters.

The wind freshened up in the afternoon from S.W., but the clouds banked up over the land, and at 7 P.M. a heavy squall of wind and rain came out from the eastward, and after that the wind became variable till midnight with heavy clouds about.

Monday, April 25.

At daylight this morning there was a nice breeze blowing from S.S.E. No boats out at the ship, but some were seen under the land standing out. The first arrived in the bank at 7.15 A.M. and after that they followed at intervals until 9.30, by which time 31 boats had arrived. The coxswains said that the other boats did not come out on account of the rain and cloudy weather.

The ss. Active came out at 10 o'clock without Mr. Twynam, and I sent her in again at 2.45 P.M. The boats were kept working till 2 P.M., when they were started in with about 260,000 oysters in all.

The wind was moderate from S.W. by S. all the afternoon, and much less of the S.W. swell that has been running in the last few days, but it sprung up again after dark.

Tuesday, April 26.

This morning it was blowing fresh from S.W., a nasty sea on.

Three of the Tuticorin boats managed to get out to the bank, working to windward between 10 and 10.30 A.M., but at noon one of them went in again, her divers complaining of being knocked about by the sea; the other two went in about 2 P.M. with, I fear, very few oysters.

The ss. Active came out at noon bringing two boats in tow, but they had to go in shortly afterwards, there being too much wind and sea for them to shift about.

The ss. Active went in again at 3 P.M.

Fresh S.W. by S. breeze continued all day with clear weather, and some lightning over the land about 8 P.M.

Wednesday, April 27.

This morning it was blowing fresh from S.W. by S. with passing clouds and a nasty sea on. No boats out; none could get out against this wind and sea; and even if any were out, no work could be done.

The ss. Active came out about 10 a.m., having been sent by Mr. Twynam to take me in. I left the ship at 1 P.M. and arrived on shore at 3.

Thursday, April 28.

On shore all day at Silávatturai. There was a very heavy squall to-day with much rain, thunder, and lightning, came out from the N.E. right against a strong S.W. breeze, and the wind remained off the land till after dark.

Friday, April 29.

On shore all day at Silávatturai. The wind was back in the S.W. direction this morning, and blowing strong.

We observed that the guard vessel had run in and anchored outside of the reef this morning, and the tindal Joakim went off, and brought her into Kondachy Bay, and when he came on shore he said that the man in charge was afraid of parting the chain if he had remained on the bank any longer with such a heavy sea on, so he weighed anchor and ran in, and the tindal is of opinion that there will be no more fishery weather.

Saturday, April 30.

This morning early there was a little lull in the wind, and it went round to south, and we thought there was going to be a change again of weather, but in the early part of the forenoon the wind went back to S.W. and blew strong. Sent the guardship out again to the bank in charge of the tindal, to remain till ordered in.

Sunday, May 1.

Blowing strong all day from S.W.

It was arranged this morning that the ss. Active should tow the boats down to Kallar, so as to give them a chance of going out to the bank to-morrow morning, and that they were to start at 2 P.M.; but although the ss. Active had steam ready then and was waiting for the boats, it was 6 P.M. before they went out to her and she got started with 20 of them in tow.

The ss. Active returned at 11 P.M. for another batch of boats to be towed to Kallar, but none would start.

Monday, May 2.

Blowing strong from S.W. this morning. The boats that were towed to Kallar were seen under sail standing out, but by 10 A.M. they had all run back, with the exception of four, which managed to reach the bank and come in at 4 P.M. with 17,500 oysters Government share.

The tindal of the guardship sent a message that it was not safe to remain on the bank any longer, and the divers who were in the four boats said that they could not go out again. Some of the head divers came to Mr. Twynam, and said that they could work no more, and begged to be released, and I told Mr. Twynam that the monsoon seemed to be set in, and that I doubted a favourable change of weather coming now so late in the season.

Tuesday, May 3.

Blowing strong from south-west at daylight. Mr. Twynam proclaimed the fishery closed, and the ss. Active was sent out to the banks to lift the buoys and send the guardship in. She came in and anchored at 2 P.M., and the ss. Active returned at 5 P.M., when the engine driver reported that he had lifted all the buoys, but the shoal buoy was found broken up.

Wednesday, May 4.

Blowing strong from S.W. all day. Many of the boats cleared away.

Arranged for the ss. Active to tow the three Colombo boats and one Kalpitiya boat down to Karaitivu to-morrow morning, so as to give them a chance of proceeding southwards inside of the island.

Thursday, May 5.

At daylight this morning it was blowing moderately fresh from south-west, but clouds were seen banking up over the land, and at 8 A.M. there was a sharp squall with rain come out from the north-east, which completely checked the south-west wind, and for the remainder of the day there was beautiful weather with a nice sea breeze in the afternoon from the west.

The ss. Active started with the four boats in tow, as arranged yesterday, at 9 A.M., and returned at 4 P.M.

Nearly all the boats and divers cleared out to-day, and it would now be impossible to take full advantage of the change of weather should it last. It was found in the evening, however, that some two or three boats had returned on the chance of work beginning again, and that there were about twenty boats and divers ready to go out to the banks again; so Mr. Twynam arranged for the ss. Active to tow the boats to Kallar to-night, and for the guard vessel to go out to the bank again to-morrow morning. I went out to the guard vessel after dinner in the ss. Active, and directed her to go back and tow the boats that are prepared to go out to the bank to Kallar, and then return to the guardship to be ready to tow her out in the morning.

Friday, May 6.

At 4.30 A.M. weighed anchor and proceeded in tow of the ss. Active with a fresh southerly breeze blowing, which veered round to S.W. by S. when we had gone out a few miles.

Anchored at 7.30 A.M. as nearly as possible, by the bearing procurable, in the spot where the guard vessel was before she left the bank. Observe fifteen boats coming out under sail, and by 8 A.M. a few of the leading boats had anchored near the ship. Three or four of the boats fell to leeward and were towed up by the ss. Active into position by about 9.30. Blowing fresh during the middle of the day from S.W. by S. and a lump of a sea on, which rendered it very difficult for the divers to work, and impossible for the boats to move about and look for oysters unless they were in a weatherly position. Three or four of the boats to leeward of the ship said they were getting no oysters, and the ss. Active towed them up to windward. Started the boats for the shore at 2 P.M., some of them having ceased work half an hour previously, the divers being tired out.

The total number of oysters fished, according to the report of the boats, is 102,000, which is very good considering the state of the weather.

During afternoon observed clouds banking up over the land, and in the evening there was lightning both in the E. and N.W., but the wind did not go round to the E. of S.

Saturday, May 7.

This morning at daylight it was blowing fresh from S.S.W., no boats in sight, but at 8.30 A.M. observed the ss. Active coming out with some boats in tow, and at 10 she arrived on the bank with six boats. Noon wind and sea gone down a little; the six boats are working close to the ship.

Sent the boats away at 3 P.M. with about 50,000 oysters in all, Mr. Twynam having sent a message by the ss. Active for me to come ashore. I left the guardship in the ss. Active at 4 P.M. and landed at 5.30

Sunday, May 8.

Some of the divers promised to go out last night, but later on they came to Mr. Twynam's bungalow and said it was impossible to work any more on the banks, and begged to be let off. Consequently Mr. Twynam finally closed the fishery this morning, and the ss. Active was sent out about 11 a.m. to tell the guardship to come in, which she did in the afternoon.

Wednesday, May 11.

There was nothing for me to particularly record during the last two days. It having been decided that I should give the Kateeb Sahib (who has been a large purchaser of oysters) and all his baggage a

passage over to Tuticorin in the guardship, as I shall probably pass close to that place on my way to Colombo, he was told to ship all his baggage this afternoon in two boats to be towed by the ss. Active out to the "Sultan," but owing to a strong south-west wind the boats were unable to get out to the ss. Active.

Thursday, May 12.

It was blowing strong from S.W. this morning, and in consequence it was 11 A.M. before the two boats with the Kateeb's baggage was got out to the ss. Active.

I started in the ss. Active shortly after noon, and got out to the "Sultan" at 1 o'clock.

We started in tow of the ss. Active at 3 P.M., to be towed down to Kutiramalai, but finding that she could scarcely move the "Sultan" against strong wind and heavy sea, we cast off at 5 P.M., and stood to the westward heading W. by N. under topsails, jib, and courses.

The driver of the ss. Active was told to anchor under the lee of Karaitivu for the night, and to start for Colombo to-morrow morning early. Blowing strong at 10 P.M. from S.S.W., and ship plunging into a heavy sea

Friday, May 13.

At 1 A.M. the wind and sea began to moderate a little. At 7 A.M. tacked to the southward close in between Moosel and Mooley islands to the west of Paumben.

At noon the wind worked round to S.S.W., when we tacked and stood to the westward. No land in sight at dark. At 8 P.M. the land wind came off, tacked ship, and stood to the southward; a light seen on shore to the westward, but not Tuticorin light. Ship in 6½ fathoms.

Saturday, May 14.

Tacked ship and stood to the N.W. at 1 A.M. Tacked to the southward at 3 A.M., after which the wind fell light. Tuticorin light then in sight.

The wind remained light and variable till about 10 A.M., when it sprung up from the southward. We then stood in for Tuticorin lighthouse, and anchored to the eastward of it at 1 P.M., when a boat came out and took the Kateeb on shore.

Received a note from Captain Phipps asking me on shore, but I declined, as I want to be under weigh again as soon as the land wind sets in, to enable the ship to make some more southing before stretching across the gulf for Colombo.

The land wind came out strong from W.N.W. at 6 P.M., when we got under weigh again and stood to the southward.

The breeze fell light at 7.30 and we did not lose sight of Tuticorin light till 10 P.M.

At midnight stood on our course for Colombo S.E. ½ S., with a light breeze from S.W.

Sunday, May 15.

The breeze freshened up about 4 A.M., and at daylight we were going free with a fine fresh breeze from S.W., and clear weather, and in this manner we continued all day.

Sighted Colombo light about 7 P.M., bearing E.N.E.; stood for it, and anchored in Colombo harbour at 2 A.M. of the 16th.

J. DONNAN,
Inspector of Pearl Banks.

IV.—1887.

RAILWAY EXTENSION TO UVA.

DESPATCHES

RELATING TO THE

PROPOSED EXTENSION TO HAPUTALÉ.

(In continuation of No. XL. of 1886.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

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RAILWAY EXTENSION TO UVA.

No. 1.

The Rt. Hon. Sir H. T. HOLLAND, Bt., G.C.M.G., M.P., to Governor the Hon. A. H. GORDON, G.C.M.G.

Ceylon.—No. 49. Downing-street, March 2, 1887.

SIR,—WITH reference to the 6th paragraph of my predecessor's despatch No. 10 of the 7th January last, I have the honour to forward for your information copy of a further report from the Consulting Engineer as to the cost of the proposed Railway Extension to Haputalé.

I have, &c., H. T. HOLLAND.

Enclosure in No. 1.

Sir C. H. GREGORY to the CROWN AGENTS.

2, Delahay-street, February 24, 1887.

GENTLEMEN,—IN my report of the 23rd November, 1886, I stated that my estimate for the construction and equipment of the Haputalé Extension amounted to Rs. 6,843,827, on the assumption that the works of construction would be carried out by contract, as on the extension to Nánu-oya. I have now the honour to give you some explanation of the means by which I arrived at that figure.

2. Mr. Waring's report of the 25th May, 1885, pointed out that his estimate No. 4, contained in a letter dated April 7, 1884, differed from previous estimates from the fact of its having been based on the schedule prices which made up the amount of Messrs. Thomas Nowell & Co.'s contract, while his revised estimate of May, 1885, was based partly upon a revision of the works of art, after more careful consideration of local requirements, and partly upon alterations explained at length in his report of the 25th May, 1885.

3. I think it may be assumed that the prices in the contract of Messrs. Thomas Nowell & Co. were, on the whole, remunerative, and that they will be applicable to a fresh contract, and that the alterations arising from the revision of the works of art above-named may properly be adopted; and I much regret that I cannot follow Mr. Waring in all the modifications which have been made in his last estimate. But while I feel great confidence in his engineering ability, ripened as it has been by his long experience in Ceylon, and supported by great exactness in all his work, I have felt it my duty to look with great caution upon any proposed economies which might not be realised, and to avoid, as far as possible, the chance of future disappointment, by a liberal allowance for contingencies, which even high practical knowledge cannot always anticipate.

4. The most important saving contemplated by Mr. Waring is to be found in the reduction of the formation width for cuttings and embankments, and consequent decrease in the length of the culverts, and in the diminution of the quantity of ballast. In support of this important economy he quotes several cases on other railways, in which a less formation width may be seen, and emphatically points to the much less annual amount of rainfall in the district to be traversed by this extension, than in the district leading up to it. On the other hand, the dimensions adopted on the Indian State Railways, the Madras Railway, the Great Indian Peninsula Railway, and others that might be named, would not support any diminution in the formation width, but rather the reverse, and the large proportion of curves, some of them of a very short radius, and on steep gradients, would, I think, render any diminution of ballast a measure attended with some risk, as diminishing the stability of the line of railway. It must be remembered, that although the total rainfall is less along the district in question than on the Nánu-oya line, there are frequent rainstorms of great severity, which might not only disturb the ballast, but bring down heavy slips, either of which, in a country of such a rough and precipitous character, might lead to dangers of a most serious nature. After long and careful consideration, I have come to the conclusion that it would not be prudent to depart from the dimensions adopted on the Nánu-oya line.

5. The amount which would have to be added to Mr. Waring's estimate for reverting to the original dimensions of earthwork, culverts, and ballast, and the consequent raising of station platforms, would be Rs. 189,861.

6. I do not find in Mr. Waring's estimate any provision for additions to workshops, for which I set down Rs. 50,000.

7. In Mr. Waring's last estimate I find put down for contingencies, in schedule No. 1 L, reserve quantities, Rs. 83,250, and in schedule No. 2 Z, contingencies, Rs. 75,000, the two amounting to Rs. 158,250. I propose to bring the allowance for contingencies up to Rs. 488,517, which would involve an addition to Mr. Waring's estimate of Rs. 330,267.

8. The additions contemplated in the last three paragraphs amount to Rs. 570,128, but from this must be deducted, in order to show the total cost of construction and equipment, the sum of Rs. 76,200, which appears in Mr. Waring's estimate, schedule No. 1 M, for maintenance, which would reduce the total amount of additions to Rs. 493,928; and this sum added to Mr. Waring's estimate for the line, if made by contract, of Rs. 6,349,899, produces my estimate of Rs. 6,843,829 for the total cost of construction.

9. I confirm the opinion expressed in paragraph 2 in my report of 23rd November, 1886, that in the event of the works of construction being carried out in the Colony departmentally, under the conditions named by me, I should expect to see a saving of between Rs. 300,000 and Rs. 400,000. I may remind you that in paragraphs 3 and 4 of that report, I alluded to possible savings, estimated at Rs. 271,458. It may be right that I should explain that in not taking these into account in my estimate, I did not wish to throw discredit upon them, but I had not before me sufficient evidence to adopt them.

10. I cannot conclude this report without bearing my testimony to the great ability shown by Mr. Waring in the papers which have been under my consideration in reference to the Haputalé Extension. To any reader they bear the marks of a large amount of sound information and conscientious labour, and as an engineer I see in them evidences of professional ability and practical knowledge which entitle all he may say to the fullest consideration.

I have, &c., CHARLES HUTTON GREGORY,
Consulting Engineer.

No. 2.

Governor the Hon. A. H. GORDON, G.C.M.G., to the Right Hon. Sir H. T. HOLLAND, Bt., G.C.M.G., M.P.

Miscellaneous.—No. 152. Queen's Cottage, Nuwara Eliya, April 7, 1887.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 49 of the 2nd ultimo, giving cover to a letter from Sir C. H. Gregory, explanatory of the mode by which he had arrived at the conclusion that Mr. Waring's estimates for the construction of the railway from Nánu-oya to Haputalé were inadequate, and would require to be largely supplemented.

2. With some exceptions, of which I admit the force, the contents of this letter appear to bear out the impression referred to in the 23rd paragraph of my despatch No. 140 of the 29th ult.

I am, &c., ARTHUR GORDON.

No. 3.

Governor the Hon. A. H. GORDON, G.C.M.G., to the Right Hon. Sir H. T. HOLLAND, Bt., G.C.M.G., M.P.

Miscellaneous.—No. 140. Queen's House, Colombo, March 29, 1887.

SIR,—I HAD the honour duly to receive Mr. Secretary Stanhope's despatch No. 10, of January 7 last, declining, for the present, at all events, to sanction the proposed Extension to Haputalé of the existing line of Railway from Colombo to Nánu-oya.

2. It is, I should hope, scarcely necessary for me to assure you that Mr. Stanhope is but right in assuming that all Members of the Legislative Council, whether official or unofficial, and I may add, with few exceptions, all sections of the community at large, recognise, as fully as Her Majesty's Government could desire, that the decision of the Secretary of State has been given solely with regard to what appears to him to be the interests of the general community, and that it would have been more agreeable to him to have assented to the wishes and given effect to the views of the Government and Legislature of this Colony.

3. At the same time, it cannot be a source of surprise to you to learn that the decision of Mr. Stanhope has caused deep and widespread disappointment; or that the Executive Council, the Planters' Association, and the majority of those interested, believing the validity of the reasons which appear to have weighed with Mr. Stanhope to be, for the most part, open to dispute, should be of opinion that their inability to assent to the reasoning employed, or to admit the conclusions based on it, ought to be respectfully stated to you, and a reconsideration by Her Majesty's Government of the decision arrived at at the same time urgently requested.

This course would equally have been followed had Mr. Stanhope remained at the head of the Colonial Office; but the fact of a change having taken place in the person of the Secretary of State, renders its adoption perhaps yet more expedient, as it is quite possible that some of the points discussed may strike you in a different light from that in which they appeared to Mr. Stanhope, and that you may be led to modify accordingly the judgment pronounced by him.

4. Before entering upon the main issues of the question, Mr. Secretary Stanhope, in the despatch referred to, deals shortly with certain subsidiary considerations. I will endeavour to imitate Mr. Stanhope, both in treating of these considerations before approaching the main subject of dispute, and also in discussing them but briefly. I fear, however, that I cannot dispose of them in quite so few words as he has done.

5. Mr. Stanhope argues that "even if the enterprise were carried out forthwith, a large amount of irritation and discontent would still survive among those who would not have been benefited by the Extension, and there is a likelihood, amounting almost to certainty, that strong pressure would immediately be brought to bear upon the Government to plunge still deeper into debt in order to carry on the line to Badulla."

It is not perfectly clear to me who are intended to be designated as those among whom discontent and irritation, on account of not having been benefited by the Extension, would still survive were the proposals contained in my former despatches adopted. It is no doubt true that those who are eagerly pressing for the Extension of the Railway to Galle or Jaffna will receive no benefit from an Extension to Haputalé, but this would be equally the case were the last-mentioned line, under any circumstances whatever, constructed before those in other directions are undertaken; nor would they be benefited by Extension to Badulla, which is what the parties disappointed appear to be expected to require. On the whole, therefore, it is not probable that those interested in other lines are referred to. But if planters between Haputalé and Badulla, and beyond Badulla, are meant, it is my duty to point out that the opinion is based upon a misconception.

There are no planters between Haputalé and Badulla, or beyond Badulla, who will not be benefited, and most materially benefited, by the Haputalé Extension. Possibly some of them might be yet more advantaged by a further Extension to Badulla, but not at all in the like degree. Extension to Haputalé means the acquisition by these planters of means of railway carriage for their produce, a mode of conveyance at present, (from the nature and gradient of the passes between Nánu-oya and Badulla,) inaccessible to them. Extension from Haputalé to Badulla would only mean that such accommodation would be rendered more easily accessible than at Haputalé. The difference between having such means of communication available at all, or unavailable, is far greater than that between having them available with a greater or less degree of ease and expedition. There is not, I myself believe, an estate in any part of Uva which would not benefit by the Extension to Haputalé; but as the case of the Haldummulla district is quite different from that of others in the Province, I will confine myself to saying, what cannot possibly be denied, that every estate above Haputalé,—that is to say, every estate between Haputalé and Badulla, and every estate around and above Badulla,—will benefit most materially by the Extension now contemplated. As regards Haldummulla, there are those who believe, (though it seems to me on wholly inadequate grounds,) that the produce of that district will, even after a Railway has been opened, continue to be sent by road to Colombo; but no one has suggested, or can suggest, that if it is conveyed by Railway at all, it will or can be so except from the Haputalé station, or that further Extension to Badulla is otherwise than a matter of absolute indifference to the planters of that district. The question now before us is that of giving Uva an outlet for its produce by Railway at all: the question involved in Extension from Haputalé to Badulla is

only that of improving such an outlet when it has been made. The anticipation of irritation and discontent on the part of the Uva planters is not, therefore, a factor which need influence the decision of Her Majesty's Government. Further Extension from Haputalé to Badulla, as I have before observed, must stand on its own merits. I and others have convinced ourselves, and are anxious to convince you, that the construction of a line to Haputalé will prove remunerative. If equal proof can be exhibited that a Railway between Haputalé and Badulla will pay, by all means let it too be made ; but not otherwise.

6. Mr. Stanhope finds it "difficult to allow that the Province of Uva has special claims "upon the public revenue beyond those of any other part of Ceylon." I concur in the opinion that such special claims are always to be regarded with special caution ; but they are in this case based on the strong ground of special taxation. When the planters consented to special and exceptional taxation upon themselves, it was distinctly understood that the *quid pro quo* for such taxation was Railway Extension. All other planting districts, (with the exception of a few scattered spots,) have benefited in a greater or less degree by the construction of railways already effected. Uva has not. It may be answered by those but superficially acquainted with the subject, that that Province has at least derived benefit from having the railway system brought nearer to it, and consequently rendered more available by it. But such an assumption would be erroneous. It is the case that the district, (for example,) of Maskeliya, (which is also without direct railway communication,) has thus benefited; but it is not the case as regards Uva. Speaking generally, and without reference to isolated action on the part of particular individuals, it may safely be said that no tea or coffee grown around or beyond Badulla now goes by railway to Colombo; while, were the Railway complete to Haputalé, not an ounce of such products grown in those localities would go by any other mode of conveyance. This will perhaps be the more easily understood by reference to the diagram which I have the honour to enclose. I have never said that the special claims of Uva were such as to demand or warrant the inception of a clearly unremunerative scheme, but, whatever their value, it can, I think, hardly be denied that such special claims exist. It is, moreover, to be observed, that what is asked is not that the Island should incur loss, or be burdened with a load of interest for the benefit of the Province of Uva, but that the Government should undertake a work profitable to itself, and opening for development the richest part of the Island.

The conclusion drawn by Mr. Stanhope from my insistance on the importance to the Province of Uva of early Extension of the line is not wholly warranted by facts. The uncertain and precarious position of the industries of that Province is due to competition with produce from districts already served by the Railway. If Uva were placed on an equal footing with them in this respect, its produce, which in quality and quantity outrivals that of most other places, owing to the superiority of its soil and climate, would need no defence against such competition. But if the Railway be not extended, there can be little or no development, and the portion of the Island most favourable for the operation of the planting interest will run but too great a chance of gradual abandonment.

7. It will be found that the division and difference of opinion as to the proposed Extension to which Mr. Stanhope refers, relates very much more to the mode in which that Extension shall be prosecuted than to the necessity for the Extension itself. The most prominent opponents of Extension on the existing gauge profess themselves to be as eager as any one else to extend the line; and it is a remarkable testimony to the prevalence of the desire for Extension, that even the few people who may be supposed really to regard any present prolongation of the existing line with disfavour, utterly repudiate such a supposition. Had Mr. Stanhope been still in office, I should have felt inclined respectfully to request from him some explanation of the significance in his mind of the words "the native interest." The interests of the natives are in almost every case local and sectional. I know of no general "native interest" common at once to Jaffna and to Galle. As regards the inhabitants of the Northern and Southern extremities of the Island, their wishes, so far as Railway matters are concerned, are naturally to divert Railway Extension in their own direction. The wishes of the people of the Provinces chiefly interested may, I think, be gathered from the petition of the 15,000 landholders, enclosed in my despatch No. 351, of September 16, 1886, and from the proceedings of the public meeting held at Badulla in the course of last year.

Mr. Stanhope remarks on the fact that the Railway Commission had on it no Native Member. I find that since 1872 there have been four Railway Commissions, and that upon none of them has a native sat. My instructions in the present case were, *mutatis mutandis*, to reappoint the members of the last previous Commission, naming the same individuals if they were still in the Island, and those holding the same positions as had been filled by those now absent.

8. Mr. Secretary Stanhope partly misapprehends my argument drawn from the indisposition of the Legislative Council to sanction expenditure which may render it more difficult to contract a railway loan. I am of course aware that under the present constitution of Ceylon, Her Majesty's Government can command a sufficient number of votes in the Legislative Council to ensure the adoption of any measure whatever; but this is a power which is not resorted to without grave reluctance, and only when Imperial interests of a serious nature are at stake. Mr. Stanhope is quite in error in supposing that the two Members of Council to whom he refers, and who desire the adoption of a narrow gauge of Railway, would not equally with their colleagues object to incur expenditure which would render Extension itself on any gauge more difficult to effect. The gentlemen referred to have over and over again professed that they, equally with the Government, desire Extension; and if it is expected to find them indifferent in this respect, it is a mistake. Her Majesty's Government, as I have already said, is not likely to force any measure upon the Council except where Imperial interests are concerned. Least of all is it likely to do so on a question of expenditure; and, if left to itself,

the Legislative Council will, I fear, reject, on account of their possible interference with a future Loan, many useful schemes of local improvement. I am almost certain this will be the case with regard to Irrigation Works, the steady prosecution of which, throughout the whole Colony, is that which I myself have most closely at heart. Their abandonment, in order to devote the funds applied to them to Railway purposes, is already advocated in the public press, and will only too surely commend itself to what is called European public opinion.

9. But all these considerations are, as Mr. Stanhope justly observes, subsidiary to the main issue,—whether the line can be constructed without loss to Government, and with a reasonable prospect of paying, at least, the expenses of its construction and maintenance. Mr. Stanhope decides that this cannot be expected, and assigns the following reasons for that conclusion:—

I.—That the Consulting Engineer is of opinion that the cost of construction has been under-estimated.

II.—That the ratio between working expenses and gross receipts adopted by the Commission is erroneous, and so gravely erroneous as to destroy all confidence in their other calculations.

III. That if a more reasonable ratio between working expenses and gross receipts be accepted,—(and this is fixed arbitrarily by Mr. Stanhope at 60 per cent.),—and if the estimated cost of construction be increased agreeably to the estimate of the Consulting Engineer, the receipts, even if amounting to the sum anticipated by the Railway Commission, would not suffice to pay the interest and sinking fund of the proposed loan.

IV.—That it is doubtful whether the rates now levied on goods traffic could be lowered so much as is assumed by the Commission, and that the estimate of traffic is not sufficiently free from uncertainty.

10. I will deal with these points separately; but for the moment I will assume that the Consulting Engineer's estimates are correct, and that the line will cost, if departmentally executed, R6,500,000, or by contract R6,843,827, and with this assumption, proceed to consider the charge brought against the Commission that its calculations are grossly erroneous in one particular, and untrustworthy in all others. The accusation is a singular one to prefer against some of the most acute men of business in the Colony. I venture to think that it is ill-founded.

11. Mr. Secretary Stanhope observes that a ratio of thirty-five per cent. between working expenses and gross receipts is "so clearly inadequate" that it ought to have led to the detection of the grave error which had been committed in dealing with one of the most important factors in the question of the prospects of the proposed Extension. With all submission, and the utmost deference, I must venture to reply that, after having, with the assistance of the Members of my Executive Council, and that of some of the Members of the Railway Commission, very carefully and anxiously reconsidered the matter, I am unable to perceive any grave error in the calculations of the Commission, and am compelled to repeat that the estimate of working expenses prepared by it appears to me sound and reasonable, while, if any allowance is to be made for over-sanguine expectations, and the ratio of expenses to receipts increased accordingly, it at all events should certainly not be to the extent of nearly doubling it, as has been done in Mr. Stanhope's despatch.

12. Mr. Stanhope assumes that the estimate of R275,000 is "solely derived from the "average rate of expense per mile throughout the whole Railway system in Ceylon, with additions "for the cost of carrying the traffic over the Main Line."

That assumption, however, is erroneous. The estimate of R275,000 is arrived at by applying to the Haputalé Extension the actual annual expense per mile of line on the Nánu-oya section only, (with addition for cost of carrying the traffic over the main line); and this is both a fair and legitimate mode of calculation, seeing that the Haputalé Extension would be merely a continuation of the Nánu-oya section, differing from it in no material point, possessing the same natural features, and worked by the same train service. This is very plainly stated in the twelfth paragraph of the Report of the Railway Commission itself, where it is said, "The amount for "working expenses is based on actual experience, and not on an estimate..... the General "Manager has taken as a guide the working expenses *of the Nánu-oya Section*, and has added "thereto a sufficient sum to cover the cost of running the extra traffic on the Main Line, besides "providing for renewing the permanent way."

13. Had the estimate been derived "solely from the average rate of expense per mile throughout the whole railway system of Ceylon," as Mr. Stanhope appears to have supposed, the objection, "that a calculation of working expenses on the basis of a mere mileage rate prevailing "on other lines differing from the proposed line in length and other essential conditions, is "obviously unsound in principle," would have been a serious one; but the estimate is not so derived, and the soundness of the calculation is testified by the fact that it is based on those very conditions, (exact length of line only excepted,) which it is intimated by Mr. Stanhope are essential to an accurate conclusion. The difference of a few miles more or less, (in this case 16 miles less,) is not of material consequence in applying the proportionate mileage rate, if other conditions, such as number and size of stations, and the general working, are also in proportion.

14. In Mr. Stanhope's despatch it is further stated that "in making, as adopting, this "estimate, no consideration appears to have been given to the proportion of the expenses so "calculated to the gross earnings": and this is certainly true, the gross earnings having little bearing on the question; but every consideration has been given to the expenses which would result from the gross *tonnage*, which is the material point; and the fact that the calculation has produced such a "ratio between the working expenses and gross earnings as 35 per cent." by no means proves its fallacy, seeing that the tonnage is exceptionally heavy for the section of line, and that this tonnage can be conveyed the whole length of the main line with but little additional cost; the consequence being that on the Haputalé Extension, as compared with the expenditure, credit must

be given not only for the receipts from the conveyance of the traffic over that Extension, but also, with a small deduction, for the receipts from the carriage of the traffic over the main line. If it should be said that the latter amount should be added to the profits of the main line, it is sufficient to reply that it is entirely new traffic, altogether due to the Haputalé Extension, and that the credit for these receipts must therefore be given to the latter section when considering the advisability of the construction of that section by the owners of the existing line.

15. Having thus, I trust, shown the soundness of the principle adopted in the calculations which have resulted in a ratio of 35 per cent. working expenses to gross earnings, I would draw your attention to the fact that the ratio of 60 per cent., suggested in paragraph 11 of Mr. Stanhope's despatch, is a ratio far beyond our present experience in Ceylon, and beyond that on the Nánu-oya section, which was 53 per cent. in 1885 and 51 per cent. in 1886. If the working expenses are but 51 per cent. of the gross earnings on the Nánu-oya section, where the traffic is far less than it will be on the Haputalé section, and where, as the traffic is not new traffic, (*i. e.*, has already accrued to the main line at a lower point,) the Nánu-oya section is credited its own mileage proportion only, instead of with the gross earnings (less actual cost of transit over the main line), as in the case of the Haputalé Extension, a ratio of 35 per cent. working expenses to gross earnings can well be understood.

16. The estimate of R275,000 was arrived at by taking the actual cost per mile of line in working the Nánu-oya section during the year 1885, which was R5,000 per mile of line,—(in 1886 it was still less,)—and by adding to this a further sum of R2,500 per mile per annum, to cover the eventual cost of re-laying, in addition to the present actual cost of maintenance. This gave an expenditure for total working and maintenance of R7,500 per mile of line. The larger amount of R8,000 per mile of line was taken, which, multiplied by the number of miles—*i. e.*, 25—of the Haputalé Extension, produced the result of R200,000 as the gross expenditure per annum for maintaining and working that Extension.

17. The expenditure on the Haputalé Extension having been thus arrived at, it became necessary to ascertain what would be the expenditure involved in conveying the new Haputalé Extension traffic over the existing lines—viz., the Nánu-oya and Náwalapitiya sections, and the main line. And this was arrived at as follows:—No extra outlay was provided for down traffic, the reason being that the up traffic over the existing lines is from two to three times as heavy as the down, whereas more down traffic than up traffic can be taken with the same locomotive power, and consequently the extra down traffic of the Haputalé section would simply be met by some of the wagons which now run down empty being loaded and running down full, without any appreciable expenditure.

The up-traffic would be more than met by the running of an extra train every other day (Sundays excepted) from Náwalapitiya to Nánu-oya, which would entail an actual expenditure of R75,000 per annum.

18. The estimate of an additional train three times a week from Colombo to Náwalapitiya, and once a day from Náwalapitiya to Nánu-oya, is founded on the fact that twice as many wagons can be run on one train over the first section as over the second section.

19. We thus arrive at the result that the total expenditure per annum entailed on working and maintaining the Haputalé Extension and working the Haputalé traffic over the existing lines of railway may be estimated on a liberal basis as follows:—

For maintaining and working Haputalé Extension	R200,000
For additional expenditure in conveying the Haputalé traffic over existing lines	75,000
Total expenditure	R275,000

20. There is another method of arriving at the probable working expenses, which I will now proceed to explain, in order that a comparison may be made of the two results.

21. On the Nánu-oya section three trains a day each way are run, and the total expenditure for 1886 is under R2·50 per train mile.

On the Haputalé section the same number of trains (and to a great extent the very same trains) would be run. Consequently the same expenditure of R2·50 per train mile would be incurred.

Three trains each week day, and one each Sunday, at R2·50 per train mile ...	R123,375
Cost of re-laying	62,500
Cost of transit over existing lines	75,000
	R260,875

as compared with R275,000 in the former estimate.

22. I therefore do not think the Commissioners were mistaken in the result arrived at, or that it is safe to conclude, *a priori*, and without examination of details, that a certain ratio between working expenses and earnings, calculated by shrewd business men, *must* be wrong because it is so unusually and unexpectedly low as not to be justified by experience. As regards the test of experience, however, I may add (that, whatever may be the case "elsewhere,") 35 per cent. is the ratio between working expenses and earnings obtained on the East Indian Railway,* and that, out of fifteen other Indian Railways, nine show a lower ratio of working expenses to profits than that estimated by the Secretary of State; while in Ceylon itself it has been on the Colombo-Kandy line below 31 per cent., and for some four years out of fourteen did not exceed 35 per cent.

But though not prepared to accept the 60 per cent. of Mr. Stanhope, I am ready to waive the exact accuracy of the Commissioners, and to add 5 per cent. to their calculation. I am also ready for the present to accept Sir C. H. Gregory's estimate of cost.

* Last year it was, I understand, as low as 33 per cent.

We have then—

Total cost of construction (departmentally) ...		R6,5(0,000
Revenue...	R774,183	
Less working expenses... ...	288,750	(an addition of 5 per cent. to the Commissioners' figures.)
Profit	485,433	equal to 7½ per cent. on capital cost.
Deduct for interest and sinking fund ...	325,000	5 per cent. on capital cost.
	R160,433	equal to about 2½ per cent. on capital cost.

That is to say, even assuming Sir C. H. Gregory's high estimate of cost, and adding to the working expenses 5 per cent. above what calculation has shown to be their probable amount not only would the payment of interest and sinking fund be guaranteed, but a small profit would remain, providing always that the work is departmentally executed.

23. I have shown that even if the cost is to be taken at Sir C. H. Gregory's estimate, the margin of profit is sufficiently great to permit the construction of the work without probability of loss. But is Sir C H. Gregory's estimate of cost other than a safe maximum one? Is it not rather an estimate of what the construction of the line may cost, but is unlikely to exceed, than an estimate of the probable cost of the work under ordinary circumstances? I am entirely in favour of large and safe estimates, and I think Sir C. H. Gregory far from wrong in using the figures he has done, and for which he is ready, so to speak, to guarantee the construction of the line: but bearing in mind the important fact that the Nánu-oya Extension, constructed by contractors who were under no inducement to save money for the Colonial Government, was completed for a sum of considerably over R1,000,000 less than the amount of the Loan which was deemed needful to secure its completion, I am unable to divest myself of the idea that considerable reduction may be effected. This is specially the case with regard to structures which have nothing to do with engineering or scientific features of the line. My ideas are, I confess, altogether at variance with those of Sir C. H. Gregory as to the character of the stations, sheds, engine-houses, &c., which should in the first instance be provided. A residence of some years in North America has fully convinced me that the erection in the first instance of cheap and temporary stations, platforms, goods-sheds, engine-sheds, &c., and their gradual replacement, as funds permit, by more permanent structures, is a sounder course of action than the construction in the first instance of solid and handsome buildings, although I fully admit that much may be said in favour of the latter mode of proceeding.

24. Observing Mr. Stanhope's remark, that "the conditions under which the Consulting "Engineer considers the departmental system of construction might be adopted are precisely "those which it has usually been found impossible to fulfil," I turned with some eagerness to Sir C. H. Gregory's letter to ascertain what those conditions were. They are two: 1st, that "The "works should be carried out under the direction of an engineer of practical railway experience, well "acquainted with all the conditions of work on the ground, *such as Mr. Waring*"; 2nd, that "He "should have the same latitude of action allowed him which would be granted by a large contrac-"tor in England to his chief agent in Ceylon." As Mr. Waring's services are available, and as the stipulation respecting reasonable freedom of action is one dictated by common sense, I can see nothing impracticable, or indeed difficult, in the fulfilment of these conditions.

25. Mr. Stanhope's doubt, whether the rates for goods traffic could be lowered so much as is contemplated by the Commission, is not altogether intelligible to me. There is no question of lowering or altering the existing tariff. The rates on which the Commissioners base their calculations are those which now are, and since January 1, 1886, have been, in force on the whole line, and under which its revenue has, on the whole, decidedly improved.

26. The uncertainty expressed as to the accuracy of the estimates of anticipated traffic involves a more serious doubt. It has been already explained that these estimates are based on a supposed continuance of the existing amount of traffic, and that this course was a perfectly rational and moderate one. They took no account of the indications of revival in the coffee industry, but assumed that it would remain at its present amount,—a modest assumption fully justified, because, should it unfortunately prove too sanguine, it was felt to be certain that any deficiency would be more than made up for by the increased export of tea, of which also no account was taken in the calculations, based, as they were, as I have before remarked, on the presumed continuance of the existing amount of traffic only. That the decision to take no account of the improvement in the yield of coffee showed a sober and cautious spirit will be admitted when it is remembered that not only has the improvement in this district been progressive, but that the crops of 1886 were nearly equal to those of 1878: while that some confidence may not unnaturally be felt in the rapid increase of tea traffic, the following returns will show:—

The exports of tea from Ceylon were, in—

	lb.		lb.
1881	348,573	1884	2,392,972
1882	697,268	1885	4,372,721
1883	1,805,768	1886	7,849,888

January and February, 1886 .. lb. 793,321
January and February, 1887 ... lb. 1,518,890

27. It is surely impossible to deny the present expansion of the tea industry, or that, in the absence of causes as yet unforeseen, that expansion will continue. It may, of course, be urged that this industry, like the coffee industry, may be suddenly arrested by some scourge similar to the *Hemeleia vastatrix*. No doubt this is possible, but it will be equally so at any future period. No reason drawn from the experience of tea cultivation in China, Assam, or elsewhere, leads us to anticipate such a visitation. If it comes, it will come unexpectedly, and the chance

of its appearance may be as powerfully appealed to as a deterrent from action ten years hence as it is now,—indeed, in some respects, more powerfully, for the longer any cultivation has been carried on, the more susceptible does the plant cultivated seem to be to disease.

28. It was pointed out by the Commission in its report that a large part of the tea traffic referred to hypothetically, and merely as a possible substitute for any failure in the coffee crops, was, though so referred to, in no sense speculative or conjectural, but depended solely on the arrival at maturity of tea already planted during the last few years. Mr. Stanhope acknowledges that there is "some reason to hope" this may be the case, but considers it too soon to depend on it being so.

Viewed in the light of the above figures, his successor will, I hope, show more confidence in the future.

29. The 16th paragraph of Mr. Stanhope's despatch must, I fear, have been penned with some haste. Had he paused for a moment to consider the full import of the sentence, it would have been impossible for him to have failed to perceive that the argument it contains is one altogether fallacious.

It may often pay the proprietors of a line of railway to extend that line so as to catch new traffic, when it would not pay a new company, (receiving payment only on account of the traffic passing over that extension itself,) to construct it.

This may be most shortly demonstrated by an algebraical formula :—

Let a = revenue received for transit of goods over extension alone.
b = revenue received for transit over old line of goods brought to it by extension.
x = expenses of maintenance, and running expenses on extension.
y = cost of new plant, workshops, &c., essential to a new company.

Then, if the extension is in the same hands as the old line, the profits will be $(a + b) - x$.

But if otherwise, and the extension is an independent concern, the profits will only be $a - (x + y)$.

It is therefore quite clear that the outlay in constructing such an extension, which might in the first case be a wise expenditure, might in the second case be a piece of foolish extravagance. I cannot conceive that any body of men would be found willing to associate themselves with the object of making a railway, the sole purpose of which was to supply new traffic to another line. Such a company would receive far less profit from the extension, and would, at the same time, incur far heavier expenses in its management than the proprietors of the existing line would do.

The fact of capitalists being reluctant to embark on such an undertaking could afford no proof whatever that the extension would really be unremunerative as an adjunct to an existing line.

30. Much speculation has been excited by the fact that Mr. Stanhope's despatch contains no reference to the construction of a line on any gauge between that of the existing line and the narrow-gauge Darjeeling Line, which has been pronounced unfit for the work which would be required of it in the centre of Ceylon. A line upon a metre gauge has been advocated as a compromise, but not, I think, by those who have examined the question most closely: and I apprehend that the reasons why no reference was made to such a scheme in Mr. Stanhope's despatch were that Her Majesty's Government shares my own impression that the saving effected in actual construction would be too small to counterbalance the inconvenience attendant on a break of gauge, and the cost, for a short line, of rolling stock, &c., of entirely new pattern.

31. It is, I apprehend, the view of Her Majesty's Government that the Railway should be some day continued on its present gauge, (a supposition which gains strength from the fact that Mr. Waring has been directed to complete detailed plans of the proposed Extension,) but that, to use Mr. Stanhope's words, "a few more years' experience will be required to form a safe judgment "in the matter." The great object which we have in view is to shorten this period of experience, and to show that, with great benefit to the Colony, and without appreciable risk of financial failure, a work may be now undertaken, without which the line to Nánu-oya is incomplete, and without an early prospect of the completion of which the present Nánu-oya line never would have been, and never ought to have been, constructed.

32. It is, I should hope, almost unnecessary for me to add, that it is most distasteful to me to find myself thus engaged in a species of controversy with Her Majesty's Government, and that I should greatly prefer a silent acquiescence in the decision of the Secretary of State. But when, as in this case, reasons are assigned for the conclusion adopted, which appear not only to myself, but to every Member of my Executive Council, (including the Lieutenant-Governor, who, as a comparative stranger, is certainly biased by no local influences or preconceived opinions,) to be such as could not have possibly been urged had the true facts of the case been fully before the Secretary of State for the Colonies, it appears to me that I should fail in my duty if, while very deeply regretting any obscurity of diction on my part which may have caused the failure of my previous attempts to explain the actual state of affairs to your predecessors, I were to refrain from laying before you a plain statement of the misconceptions which appear to have existed. It is, as it seems to me, a duty I owe to you and to Her Majesty's Government on the one hand, and to this Colony and its Government on the other. It would be to do an injustice to Her Majesty's Government were I to admit a doubt that the obligation of this duty upon me will be fully acknowledged, or were I not to cherish a hope that where, as is here the case, the sole object of the Secretary of State is to adopt that course which shall most conduce to the advantage and advancement of the Colony, there will be no indisposition on his part to modify conclusions the basis of which has on full investigation been shown to be defective.

I have, &c.,

ARTHUR GORDON.

No. 4.

The Right Hon. Sir H. T. HOLLAND, Bart., G.C.M.G., M.P., to Governor the Hon. A. H. GORDON, G.C.M.G.

Ceylon.—No. 281. Downing-street, August 30, 1887.

SIR,—I HAVE the honour to acknowledge your despatch No. 140 of 29th March last, in which you urgently request a re-consideration of the decision arrived at by my predecessor as to the proposed extension of the Ceylon Government Railway from Nánu-oya to Haputalé, and invite my attention to the reasons which appear to you to justify the reversal of that decision.

2. I have given those reasons my best and most careful consideration, and it is unnecessary for me to say that I recognise, quite as fully as my predecessors, the interest with which this question is regarded by an important section of the community in Ceylon, the ability with which the scheme has been advocated, and the desirability of imposing no needless checks or restraints on the realisation of a project which, if it only fulfils the expectations of those who support it, will contribute materially to the development of industries closely affecting the prosperity of Ceylon. At the same time, I am not less keenly alive than were my predecessors to the fact, that Ceylon has lately passed through a period of severe depression, from the effects of which her revenue cannot yet be said to have recovered, and that, therefore, the present is a time at which it seems hardly justifiable to embark in an undertaking certain to entail on the Colony a serious increase of financial liabilities, if a single factor in the series of calculations on which the scheme is based should prove to have been erroneously assumed.

3. A great part of your despatch is occupied in discussing Mr. Stanhope's reasons for doubting whether the conclusions of the Railway Commission appointed by you can be accepted as sound, or, in other words, whether the line can be constructed and maintained without loss to the Government. An important, perhaps the most important, question which has been raised in this connection, is that of the ratio of working expenses to gross receipts on the proposed Extension, which has been fixed by the Commission at the exceptionally low rate of 35 per cent. You will remember that in your despatch No. 265 of the 19th of June, 1885, you adopted the General Manager's estimate of this ratio at 50 per cent., and that my predecessor entertained grave doubts as to the sufficiency of this estimate.

In your despatch of the 23rd June, 1886, you adopted the far lower estimate of the Commissioners, with no more explanation than that contained in the 10th paragraph of that despatch; and I am not surprised that Mr. Stanhope should have felt it impossible to accept that estimate, especially when I observe, on reference to the General Manager's evidence before the Commission, that he was justified in his conclusion that that estimate appeared to be derived from the average rate of expense per mile throughout the whole Railway System of Ceylon, with additions for carrying the traffic over the Main line.

4. In the absence of explanation of the remarkable decrease in the estimate of working expenses from 50 to 35 per cent., my predecessor was clearly bound to reject the conclusions of the Railway Commission, and if, in so doing, a reflection has, as you assume, been cast on some of the most acute men of business in the Colony, the cause is to be sought solely in the manner in which this part of the question has been presented for the Secretary of State's consideration. I may remind you that a Commission, composed of members quite as fully entitled as those of the recent Commission to the designation of acute men of business, made a report on the Nánu-oya Extension, equally authoritative, and supported by figures and calculations at least as detailed and voluminous as those now under review; and that that report has been entirely falsified by the event. It was, therefore, not to be expected that my predecessor could accept an estimate of working expenses of 35 per cent., without the most conclusive justification.

5. You now explain the method by which that estimate was prepared, and I must frankly admit that I entertain doubts as to whether that method can safely be adopted. It is as follows:—The actual working expenses on the Extension itself are obtained by applying to the 25 miles of that Extension the mileage rate of the 41 miles of the Nánu-oya section, to which an addition is made for carrying the new traffic over the existing line, and a further addition for the eventual cost of replacing the rails on the Extension. The first of these calculations appears to me to ignore the fact that much of the cost of railway working is either independent of mileage or not in direct proportion to mileage. Moreover, the Extension is not, as you state, a few miles, but nearly 40 per cent. shorter than the Nánu-oya section; and as the result of this difference is to reduce from 41 to 25 the division which determines the mileage rate, it would seem only prudent to require clear proof that all the conditions of working on the Haputalé Extension will bear a proportion to those on the Nánu-oya section exactly corresponding to the difference in mileage. Again, as regards the cost of conveying the new traffic over the Main line, you appear to have assumed that the down traffic will entail no additional cost, because it will merely absorb rolling stock which at present runs empty. This assumption is certainly not justified by experience here, where it is found, as might indeed be anticipated, that the bringing in of additional traffic does not solve the Traffic Manager's difficulty of estimating the daily provision of rolling stock required, and that no fresh traffic is ever carried without some additional cost. As to the estimate of cost of relaying, I consider that if an item of this nature is to be charged to working expenses, to which in point of fact I see no alternative on Government lines, the renewal of locomotives, rolling stock, a share of deterioration of workshops and plant, and other similar renewal charges, should also be provided for.

6. In the 20th and following paragraphs of your despatch under acknowledgment, you explain the method of estimating working expenses by a train mileage rate, and from this method you deduce a result very similar to that obtained by the Commission. I must observe that in the first place you assume that the three trains a day, which carry the Nánu-oya traffic, will suffice for the service of the Extension, a conclusion which appears inconsistent with the

statement made in the 15th paragraph of your despatch, that the Nánu-oya traffic is "far less than it will be on the Haputalé section." If the number of trains has to be increased, the whole calculation will be upset, and the result will be to disprove completely the conclusions of the Commission. In the second place, I have to point out that the train mileage mode of calculation depends on a double multiplication, and that comparatively small errors in the two multipliers will gravely affect the result. For this reason it is not a reliable method of estimating, although a most useful means of measuring the cost of actual working when deduced from known train mileage and known working expenses.

7. For these reasons I entertain doubts whether the Commission's estimate of 35 per cent for working expenses can be safely accepted. The fact to which you refer, that the Main line, in exceptionally prosperous years, has been worked at this ratio, must be considered side by side with the other fact, that in more recent years, under conditions similar to those which may be expected to affect the Extension, these expenses have exceeded 40 per cent. on this, the most remunerative portion of the system. When I turn to the records of the extensions of the Main line, I find that their working expenses have ranged from 51 per cent. on the Nánu-oya to 103 per cent. on the Matalé line. It may be contended that these extensions have brought to the Main line none of that new traffic which is expected to prove so remunerative in the case of the Haputalé Extension. It is, however, certain that these extensions were built with the object of feeding the Main line, and the fact that they have proved to be most costly suckers affords, in my opinion, strong justification for exercising caution as regards further extension.

8. Mr. Stanhope, in proposing 60 per cent. as a reasonable rate of working expenses, adopted the standard suggested by you, namely, the working of the Nánu-oya section. I admit, however, that the conditions affecting the Haputalé Extension are in some respects more favourable than on that section, and I consider that it will be safe to take, as regard working expenses, the same view which you have taken in other questions connected with the work: that is to say, to regard it simply as an extension of the general system, and to apply to it the average rate of working expenses prevailing on that system. This I understand, from the Administration Report of 1885, to be about 56 per cent., and on this basis, adopting your estimate of traffic and the Consulting Engineer's estimate of departmental construction, the work will just pay its expenses and provide for the increased annual charges of the debt incurred for its construction.

9. The financial question at issue, therefore, resolves itself to a certain extent into this. Is there, in this forecast of the future of this work, a reasonable prospect that no increased burden will be thrown on the finances of the Colony? I need not say I shall be much gratified if you are able to give me a satisfactory answer to this question; but, as the matter now presents itself to my mind, grave doubts arise on at least two points. They are as follows:—

(1) Can the estimate of traffic be trusted as regards the contributions from the Badulla district, and those in its immediate neighbourhood?

(2) How can the charge for interest on the debt during construction be provided for?

10. As bearing on the first point, I have not failed to notice that you state in the 5th paragraph of your despatch under acknowledgment, that there are no planters between Haputalé and Badulla, or beyond Badulla, who will not be most materially benefited by the extension, and that you believe that there is not an estate in any part of Uva which would not so benefit. And I also note that as regards Haldummulla, further extension to Badulla must be a matter of absolute indifference to the planters of that district, and that the question of a further extension to Badulla is merely one of improving the outlet for the produce of the Uva district, which you anticipate will be provided by the Haputalé Extension. This view is evidently shared by the Railway Commission, inasmuch as nearly one-half of the estimated traffic on which they rely is derived from the districts around and beyond Badulla. But I am bound to compare with this expression of opinion the confident assertions of the deputation which waited on Lord Granville in June, 1886, and to which reference has been made by my predecessor. That deputation comprised, among others, the Chairman of the Uva Company, the representatives of Messrs. Baring Brothers and of Messrs. Murray Robertson and others, owners of the Uva estates, and it stated in the clearest terms that the Haputalé Extension would not secure the traffic from a large portion of the Uva district, the produce of which would still be conveyed by cart to Colombo, unless the line were extended to Badulla.

11. The statements of that deputation naturally weighed with my predecessors, and their views have been strongly corroborated by the statement made to me recently by Mr. Christie, the Chairman of the Planters' Association and a member of the Railway Commission, who assured me that the planting interest in Uva would certainly not be satisfied until the line had been carried to Badulla. I have further gathered from the newspapers that the Badulla Planters' Association are pressing for a narrow-gauge extension to Badulla, and mention has been made of pushing the line even beyond Badulla. In these circumstances it is of the first necessity to ascertain beyond doubt that the large proportion of traffic credited to the Haputalé Extension from the Badulla district will accrue to that line, and that the history of the Haputalé Extension, if sanctioned, will not be a mere repetition of the most unsatisfactory experience of the Nánu-oya section, which, advocated originally on its own merits, precisely as the Haputalé Extension is being pressed, now occupies, as stated in paragraph 31 of your despatch, the position of a failure, to be redeemed only by further extension.

12. The importance of a clear understanding on this part of the question will be obvious to you, because I regard the discussion of the rate of working expenses as closed, and, with the ratio of 56 per cent., which I am satisfied to accept as reasonable, there is no margin for the least reduction of the traffic estimate; and further, because, if the statements of the deputation and of Mr. Christie are correct, the question which has to be considered is that of an Extension from Nánu-oya, not to Haputalé merely, but to Badulla

13. The second difficulty to which I have alluded is one for which I can suggest no satisfactory solution. The charge to be met is considerable, amounting at 4 per cent. to Rs. 260,000 a year; probably about one-third of this will have to be provided for in the first year of construction, the charge increasing at intervals until completion. No increase of the Colony's permanent debt can be incurred on this account, and I have great difficulty in arriving at any other conclusion than that, assuming all other difficulties to have been overcome, this—and indeed any other considerable public work—must be postponed until the revenue has recovered sufficiently to meet liabilities of this nature. Otherwise, either the charge for debt during construction must be paid for out of the capital of the loan, or the ordinary expenditure of the Colony must be curtailed, and the ordinary services crippled, in order to pay the interest on fresh loans.

14. There are many statements of secondary importance contained in your despatch, to which I have not thought it necessary to refer, because, concurring with you in the desirability of avoiding as far as possible a controversial tone, I have felt it better to deal only with those parts of the question which have a distinct bearing on its solution.

15. Looking, therefore, on the one hand, to the importance of this subject, and its bearing on the financial condition of the Colony, and, on the other hand, to the strong opinion expressed in favour of this Extension, which, as I have before said, I fully recognise, I have thought it desirable, before arriving at a final decision upon the subject, to re-state to you the difficulties which weigh with me, as they did with my predecessors, and to request to be favoured with any further observations which you may have to offer; and I would especially desire your attention to the question raised in the 10th paragraph of this despatch.

I am, &c.,

H. T. HOLLAND.

No. 5.

Governor the Hon. A. H. GORDON, G.C.M.G., to the Right Hon. Sir H. T. HOLLAND, Bart., G.C.M.G., M.P.

No. 194.—*Miscellaneous.* Queen's Cottage, Nuwara Eliya, May 13, 1887.

SIR,—WITH reference to my despatch No. 152, of April 7, and to previous correspondence on the subject of Railway Extension to Haputalé, I have the honour to transmit copy of a letter received from Mr F. Prestage, Managing Director of the Darjeeling-Himalayan Railway, offering to construct a first class substantial 2 ft. 6 in. gauge railway from Nánu-oya to Badulla, and equip it with the necessary rolling stock and appliances, for the sum of £6,350 sterling per mile, or a lump sum of £349,250.

I venture to recommend that the proposal be referred to Sir C. H. Gregory, the Consulting Engineer (or other competent authority), for his opinion as to its feasibility.

The proposed heads of agreement mentioned in the last paragraph of Mr. Prestage's letter were not, as stated, enclosed with that letter.

I have, &c.,

ARTHUR GORDON.

Enclosure in No. 5.

F. PRESTAGE, Esq., to the Hon. the COLONIAL SECRETARY.

Nuwara Eliya, March 21, 1887.

SIR,—HAVING completed an inspection of the proposed railway extension to Badulla *via* Haputalé, and prospected on to Passara, I have the honour to submit the following firm offer for His Excellency the Governor's consideration:—

First.—I will engage to construct a first class substantial 2 feet 6 inches gauge railway from Nánu-oya to Badulla, and equip it with the necessary rolling stock and appliances, for the sum of £6,350 sterling per mile, or a lump sum of £349,250.

Second.—The engine power and rolling stock to be equal to carrying, in two mixed trains, all the goods traffic estimated to be received by the Commissioners of 1886, and, in addition, all the passenger traffic that it is expected will offer at the onset.

Third.—The contract dates of the completion of the works and equipping of the line ready for opening for traffic to Haputalé to be the end of 1888, and to Badulla by the Queen's Birthday 1889, provided that His Excellency will grant provisional sanction to commence preliminaries before I leave the Island this week, and full and complete sanction to proceed by the middle of May next.

Fourth.—The line and rolling stock to be satisfactorily tested up to a speed of twenty miles per hour, but the usual working speed not to exceed twelve miles.

By the first and second conditions the Colony will obtain a completely equipped railway, equal to carrying in one hour out of the twenty-four all the traffic authoritatively estimated to come upon it for some time to come, and it is most unlikely to be tested up to half its full carrying power for ages. In addition, the total outlay will not reach *two-thirds that of the proposed broad gauge line to Haputalé only, exclusive of rolling stock.*

I propose a 2 feet 6 inches gauge for the reasons previously intimated, as I find that curves of over 180 feet radius can be got in at all points without serious outlay. The gauge will also allow of fully the estimated power being put on the line, and of the proposed speed, which exceeds that of the present Main line, being easily run to.

Although I am of opinion that the proposed two mixed trains run each day daily will carry and serve well all the traffic offering for some time to come, yet it will be satisfactory when sufficient traffic offers to necessitate the working of passenger trains only. The two mixed trains would, however, be equal to carrying the estimated quantity of goods and some 150 passengers per train, much more than the number that now arrive at and depart from Nánu-oya daily.

I beg to enclose the proposed heads of an agreement under which it is intended I should be bound, by the penalties mentioned, to carry out the four main conditions herein enumerated, and under which I hope it will be thought that the interests of the Government will be sufficiently protected, and I shall be obliged if you will bring to His Excellency's notice that I am prepared to agree to any reasonable conditions by which the satisfactory performance of the railway up to the standard noted shall be considered a fulfilment of the contract.

I have, &c.,
F. PRESTAGE.

Sub-Enclosure in No. 5.

F. PRESTAGE, Esq., to the PRIVATE SECRETARY to H. E. THE GOVERNOR.

Colombo, March 23, 1887.

SIR,—IN accordance with a sanction of His Excellency I have, with the assistance of the Manager of the Government Railway, completed a test of the carrying capacity of the broad gauge wagons as against the proposed narrow gauge, and find that the average load of the broad gauge wagons, 15 feet long, 7 feet 5 inches wide (inside), and 6 feet 6 inches high, is 85 chests of tea, whilst the internal space of a narrow gauge wagon, 12 feet long, 7 feet 2 inches wide, and 6 feet 6 inches high, holds 75 chests; so that a broad gauge train of 12 wagons of 180 feet in length (net, without buffer space) would carry 920 chests of tea only, whilst a narrow gauge train of the same length, but of 15 wagons, would carry 1,125 chests.

If these results will in any way influence His Excellency in coming to a decision to advance before I leave, I am at His Excellency's command until the "Pekin" sails.

I have, &c.,
F. PRESTAGE.

No. 6.

F. PRESTAGE, Esq., to the Hon. the COLONIAL SECRETARY.

Darjeeling, April 4, 1887.

SIR,—IN continuation of my letter of the 23rd ultimo from Colombo, addressed to the Private Secretary of His Excellency the Governor, reporting the results of certain tests made to ascertain the carrying capacity of broad and narrow gauge rolling stock, I find that an error was made in working out the figures, and that a train of 12 wagons of the broad gauge would carry 1,020 chests of tea instead of 920 only, as before reported, whilst the number carried in the 15 narrow gauge vehicles forming a train, also 180 ft. long, remains at 1,125.

* * * * * *

I am, &c.,
F. PRESTAGE.

No. 7.

The Right Hon. Sir H. T. HOLLAND, Bart., G.C.M.G., M.P., to Governor the Hon. A. H. GORDON, G.C.M.G.

Ceylon.—No. 282. Downing-street, August 30, 1887.

SIR,—IN my despatch No. 281 of this day's date, on the subject of Railway Extension to Haputalé, I did not allude to Mr. Prestage's scheme for the construction of a 2 ft. 6 in. gauge line from Nánu-oya to Badulla, thinking it would be more convenient to separate it from the general question of Railway Extension.

2. I now have to inform you, in answer to your despatch No. 194 of May 13, that the scheme in question has been referred to the Consulting Engineer, as you suggested, for an expression of his opinion upon it.

3. I take this opportunity of enclosing for your perusal a copy of a letter from Mr. Brown, the Managing Director of the Uva Coffee Company, pointing out the necessity, in the event of any extension being undertaken, of carrying the line as far as Badulla.

I have, &c.,
H. T. HOLLAND.

Enclosure in No. 7.

The Uva Coffee Company, Limited, to Sir H. T. Holland.

The Uva Coffee Company, Limited,
5, Dowgate Hill, London, E.C.,
June 9, 1887.

Sir,—Sir Roper Lethbridge having postponed *sine die* the deputation to wait on you relative to Railway Extension from Nánu-oya into the district of Uva, in the Island of Ceylon, and the immediate bettering of the means of transport being of vital necessity for the present and future prosperity of this district, I take the liberty of addressing you on the subject.

Being thoroughly acquainted with the district in question, from which I have just returned, I cannot too strongly urge the immediate consideration of a narrow gauge railway to the town of Badulla, the outlay on which would not exceed the amount specified for the Extension to Haputalé only on the broad guage; this latter being the extension asked for by a few mainly interested in Haputalé, forgetting that any line terminating there would not secure the traffic from the Badulla district.

If the Government have firmly resolved to withhold Railway Extension for the present, either to Haputalé or Badulla, I would point out that both districts would be greatly relieved by the completion and opening up of the cart-road from Badulla to Kandy, in all fifty-seven miles in length, twelve miles at either end of which are now a good macadamised road, there remaining only thirty-three miles to be completed, and which distance is now a passable road requiring but the erection of bridges over the main streams and metalling of the surface.

Sickness along the route has up till lately been the excuse for the delay in completing this road. A wealthy native gentleman, Mr. De Soysa, has however cleared and planted up a large area of the land along that part of the route which was considered unhealthy, and this is now inhabited, so that further delay on this score is out of the question.

The cultivation of tea has now become a most important enterprise in Ceylon, so much so that at no former period of the Island's history has there been so much land under cultivation; and cheaper and more rapid transport is now of the gravest moment to the planters in this district.

The very large interests I represent in this district must be my excuse for addressing you on this most important matter, and the making of a railway all the way to Badulla, or the opening up of the Lower Badulla-road, are matters of such urgency that I should esteem it a great favour if you would grant me the honour of an interview.

I am, &c.,

JOHN BROWN,

Managing Director of the Uva Coffee Company, Limited;
Spring Valley Coffee Company, Limited; and the
Colombo Commercial Company, Limited.

V.—1887.

STATEMENT AND ACCOUNT

OF THE

WIDOWS' AND ORPHANS' PENSION FUND,

FOR

THE YEAR ENDED DECEMBER 31, 1886.

(In continuation of VII. of 1886.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

WIDOWS' AND ORPHANS' PENSION FUND.

STATEMENT AND ACCOUNT of the Widows' and Orphans' Pension Fund for the year ended December 31, 1886, prepared in terms of section 13 of the Ordinance No. 20 of 1885.

I.—POSITION OF THE FUND.

THE balance standing to the credit of the Fund in the hands of the Colonial Treasurer on December 31, 1886, was Rs. 188,443·69.

The following table shows the receipts and expenditure for each month of the year :—

	Receipts. Rs. c.	Expenditure. Rs. c.	Balance Rs c.
January	6,496 54	... 300 48	... 6,196 6
February	7,918 6	... 194 15	... 7,723 91
March	6,875 36	... 163 31	... 6,712 5
April	7,581 11	... 967 60	... 6,613 51
May	7,823 54	... 348 71	... 7,474 83
June	6,935 90	... 657 75	... 6,278 15
July	6,598 59	... 803 26	... 5,795 33
August	6,917 85	... 247 98	... 6,669 87
September	6,647 8	... 506 95	... 6,140 13
October	7,720 23	... 956 8	... 6,764 15
November	7,711 71	... 721 8	... 6,990 63
December	16,251 60	... 1,097 61	... 15,153 99
Total ...	95,477 57	6,964 96	88,512 61
Add balance of December 31, 1885 ...			99,931 8
Total ...			188,443 69

Classification of the Receipts and Expenditure of the Fund during the year.

	Rs. c.		Rs. c.
By Abatements ...	86,242 32	To Pensions paid ...	5,656 63
Over-payments ...	2 0	Refunds ...	552 77
Interest* ...	9,219 72	Office charges ...	755 56
Refund of Pensions ...	13 19	Balance ...	88,512 61
Unpaid Pension ...	0 34		
	95,477 57		95,477 57

The highest amount of monthly contribution was Rs. 83·33, and the lowest Rs. 0·83.

II.—CONTRIBUTORS.

On December 31, 1886, the number of contributors in the books of the Fund was 1,545, and on December 31, 1885, 1,144, being an increase of 401.

Number of Officers who ceased during the year to contribute.

By deaths	17	By being discontinued from Government service ...	2
By dismissals	14	By being disqualified ...	6
By resignations	23		63
By having attained age 65 ...	1		

III.—PENSIONS.

Of the seventeen contributors who died during the year, fourteen left claimants on the Fund :—

The widow of Baron Perera, Secretary, District Court, Chilaw.
Do. D. E. De Saram, District Judge, Galle.
Do. J. F. Obeysekara, Public Works Department.
Do. A. B. Wickremeratne, Pensioner, late Interpreter Mudaliyár, Mátara Kachchéri.
Do. J. M. Jayasundra, Raṭémahatmayá, Ratnapura District.
Do. J. N. Adriansz, Interpreter, District Court, Mannár.
Do. W. A. B. Fyers, Survey Department.
Minor children of do. do.

* Of which Rs 8,611·87 was interest paid by Government, and the balance was interest on arrears of contributions.

The widow of G. T. F. Leembruggen, Customs.
Do. J. A. Kelly, Customs.
Do. H. P. Perera, Registrar's Office.
Do. R. Van Cuylenburg, Librarian, Museum.
Do. C. A. Mack, Pensioner, late Head Clerk, Public Works Department.
Do. H. S. Potger, Public Works Department.
Do. S. M. Appuhami, Police Sergeant No. 743.

Statement showing Pensions paid from the Fund since the last Report furnished to the Hon. the Colonial Secretary, June 1, 1886.

Name of Pensioner, and Name of Officer in right of whom Pension is drawn	Amount of Annual Pension Rs.	c.		Date of Commencement of Pension.	
Ukku Menika—Baron Perera, Secretary, District Court, Chilaw	103	92	...	Feb.	2, 1886
Clara Henrietta—D. E. De Saram, District Judge, Galle	849	22	...	April	15, 1886
Caroline Harriet—J. F. Obeysekara, Clerk, Public Works Department, Galle ...	86	17	...	April	21, 1886
Dona Johanna—A B Wikkremaratna, Mudaliyar, Mátara Kachchéri...	23	12	...	April	9, 1886
Jane Arnelia J. M. Jayasundara, Raṭémahatmayá of Ratnapura District	98	98	...	April	19, 1886
Susan Maria—J N Adriansz, Interpreter, District Court, Mannár	38	0	...	June	2, 1886
Christiana—W. A B. Fyers, Survey Department .	333	96	...	July	17, 1886
Minor children— do. do. ..	371	0	...	July	17, 1886
Caroline Catherine—G. T. F Leembruggen, Customs	136	99	...	Aug.	24, 1886
Annie Jane J. A. Kelly, Customs	121	88	...	Aug.	29, 1886
Helena Maria—H. P. Perera, Registrar's Office ...	47	0	...	Sept.	2, 1886
Emily R Van Cuylenburg, Librarian, Museum ...	283	20	...	Sept.	16, 1886
Annie Elizabeth—C. A. Mack, Head Clerk, Public Works Department	76	60	...	Oct.	27, 1886
Emily Elizabeth—H. S. Potger, Public Works Department	425	46	...	Nov.	25, 1886
Tikiri Menika—S M. Appuhami, Police Sergeant No 743	33	32	...	Dec.	12, 1886

IV.—DIRECTORS.

The Board of Directors for the year consisted of the Hon. the Treasurer, the Hon. the Surveyor-General, the Solicitor-General, the Postmaster-General, and the Assistant Auditor-General.

September 29, 1887.

G. T. M. O'BRIEN,
F. C. H. CLARKE,
CHAS. L. FERDINANDS, } Directors.
LIONEL LEE,
R. A. BROHIER,

VI.—1887.

PETITION

FROM

CERTAIN INHABITANTS OF THE ANURÁDHAPURA DISTRICT

PRAYING FOR

EXEMPTION FROM PERFORMANCE OF LABOUR ALONG THE YÓDA-ĒLA.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

EXEMPTION FROM LABOUR ALONG THE YÓDA-ĘLA.

To His Excellency the Honourable ARTHUR HAMILTON GORDON, G.C.M.G., *Governor and Commander-in-Chief, and the Honourable Members of the Legislative Council of Ceylon.*

The humble petition of Amunukola Disánáyaka Męnikrála, Męḍiyawa Nambirala, late Arachchila, Galmaḍuwa Diwákara Punchirála, and two hundred and twenty-five other residents of Kęlędiullęwa, Galmaḍuwa, Namadáwęwa, Pottégama, Alutwęwa, Pahala Hamnillęwa, Amunukola, Hurigaswęwa, Rajjallegama, and Męḍiyáwa in Eppáwala Kóralé of the Nuwaragam Paláta of the District of Anurádhapura.

HUMBLY SHOWETH,—THAT ever since the introduction of the Village Tribunals into their District the petitioners have annually to clear the bunds and perform earthwork on their tanks, according to the shares of the village. They have to open and maintain a great number of communal roads, to construct Gaṇsabháwa court-houses and Gaṇsabháwa schools, and to keep them in repair.

Besides these, they have to do numerous other rájakáriya to the Government Agent and his Assistant, who are frequently on circuit. They have to attend on the Tank Superintendents and their Assistants, Surveyors, Vaccinators, and a host of other Government officials. This is the unceasing programme of rájakáriya they have to go through all round the year.

Considering the physical condition of the people of this District, and the food resources of the country, it will be seen that the amount of rájakáriya each individual has to perform in the year is much more than he is equal to.

The Government, no doubt, has introduced the Village Tribunals for the purpose of advancing the material and social condition of the people of this District, but as a matter of fact it has, by the infliction of heavy fines for default of earthwork on tanks and for other matters, driven a vast number of inhabitants of Nuwarakaláwiya to the bordering districts of Mannár, Mátalé, and Kurunęgala. Many are the instances in which people have been dispossessed of their ancestral lands on account of their inability to pay up the enormously heavy fines inflicted by the Gaṇsabháwa.

There can be no doubt that the Government consult the good of the people, but, nevertheless, by the unequal load of rájakáriya that has been imposed upon them, they have suffered, and they still suffer. So many, so frequent, and so heavy are the calls on each man's time for the various rájakáriyas, that he oftentimes fails to attend to the cultivation of his field. By such failure not only has he to lose his food supply, but by the fine imposed on him for default of cultivation he has frequently to lose the share of the field itself.

The petitioners beg to submit that they have endeavoured, and do still endeavour, to work through the heavy amount of rájakáriya they have at present to perform, believing that it is exacted for their welfare; but they submit that the load of rájakáriya already imposed on them is too heavy for them to bear. They groan under its tremendous weight.

That since 1883 the Government have commenced at an immense cost the restoration of Kalawęwa and the Yóḍa-ęla. The Yóḍa-ęla restoration was done on contract. It was understood that the work has been completed, and that the ęla is now ready to carry and distribute the Kalawęwa waters, when that reservoir fills in the forthcoming rainy season. But the petitioners, who have already more than enough to perform in the way of rájakáriya, are now ordered by the Government Agent to clear, in the first instance, at the rate of 65 by 40 fathoms per paṇgu of jungle along the Yóḍa-ęla, and next, to do earthwork on it also, according to the number of paṇgu, or shares, they hold in the village or villages under the ęla.

The landowners who are most benefited at present, and who will be hereafter benefited, are those under Tissawęwa and Basawakkulama, in the town of Anurádhapura. They own land there by purchase, and pay water-rate for water actually obtained through the Yóḍa-ęla. The petitioners have their hereditary old fields, which they have been cultivating ever so long with the water of their tanks, on which they perform earthwork. And yet the petitioners are asked to clear and do earthwork on Yóḍa-ęla, whilst the landowners under Tissawęwa and Basawakkulama are subjected to a water-rate at one rupee per acre.

The petitioners, as has been stated, are loaded with various rájakáriya; and it is beyond their power to perform anything more in the way of labour towards the work of the Yóḍa-ęla. Unless they are exempted from this additional rájakáriya imposed upon them, and which it is impossible for them to bear, they must be permitted to leave the district and emigrate into another district, where they may die unmolested.

Męnikrála, Nambirála, and Punchirála, who subscribe this sheet, have, on behalf of all the signatories, come down to Colombo to lay their grievance before your Honourable Council, with the humble, but earnest, hope of obtaining redress.

For which the petitioners as in duty bound shall ever pray.

[Here follow 228 signatures.]

Colombo, September 21, 1887.

VII.—1887.

PROPOSED RAILWAY TO CHILAW.

REPORTS AND ESTIMATES

BY THE

CHIEF RESIDENT ENGINEER, RAILWAY EXTENSION,

AND THE TRAFFIC SUPERINTENDENT.

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

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PROPOSED RAILWAY TO CHILAW.

No. 1.

The ACTING CHIEF RESIDENT ENGINEER, Nánu-oya Railway Extension, to the Hon. the COLONIAL SECRETARY.

Office of the Nánu-oya Railway Extension,
Kotagala, Dimbula, April 30, 1887.

SIR,—I HAVE the honour to forward the plans, sections, and estimates of cost of the proposed Railway to Chilaw, of which a list is annexed.

2. The estimates are for lines on the broad gauge (5 ft. 6 in.) and narrow gauge (one metre, or 3 ft. 3⅜ in.).

3. The line is properly staked out with stakes at every five chains on the straights and flat curves, and at every chain on the sharp curves.

GENERAL DESCRIPTION OF THE LINE.

4. The work was begun at Chilaw at a point about a quarter of a mile east of the court and resthouse, where there is a suitable place for the Chilaw station. Thence the line runs nearly parallel to the Colombo road direct to Mádampé. For the greater part of this length the line is on a low embankment, to keep it above the level of high floods.

5. To the south of Mádampé there is a long stretch of low land and paddy fields, and in the immediate neighbourhood there are three tanks for irrigating these paddy fields. In order to avoid two of these tanks, the Tinipiṭiwęwa and Mahawęwa, and also the villages of Mádampé and Mahawęwa, the line was taken in a south-easterly direction from Mádampé round the east side of the Tinipiṭiwęwa and across the low land and paddy fields, about three-quarters of a mile to the east of the Colombo road, and then into Horakelé estate.

6. To cross these low lands several bridges are necessary: one of 60 ft. span for the ela to the north of Tinipiṭiwęwa, one of 60 ft. span near the inlet to that tank, one of three 60 ft. spans for the Kaḍupiṭi-oya, one of 60 ft. span for the canal, and one flood opening of 60 ft. span below the Kuḍuwęwa. In all, between 6 miles 72 chains and 8 miles 48 chains the waterway provided amounts to 426 lin. ft., including a 6 ft. open culvert at 7 miles 18 chains.

7. After passing through Horakelé estate the line runs fairly direct to the site of the station which is to accommodate the villages of Maráwila and Nátanḍiya, about half a mile to the east of Maráwila; thence again nearly parallel to the main road, through the villages of Wennappuwa, Dummaladęniya, and Nainamaḍama, to the Giṇ-oya and canal. There is to be a station at Wennappuwa, which is the centre of the thickly-populated district, and has near it several large Roman Catholic churches. The Giṇ-oya and canal will require a bridge of three 80 ft. spans. Half a mile to the south of the Giṇ-oya a station is proposed at the Bólawatta road.

8. In order to go as direct as possible from Bólawatta to Kochchikaḍe, the Colombo road is crossed at 21 miles 53 chains; that road makes a considerable detour by the Tóppuwa bridge, and to have kept on the eastern side of it would have made the line more than a quarter of a mile longer.

9. At 22 miles 15 chains the Maha-oya is reached; this is the most important river that the line crosses: it is subject to high floods, and overflows its banks. The waterway I propose for this river is a bridge of five spans of 100 ft. each, and two flood openings of 60 ft. each in the approach embankments on either side.

10. From Kochchikaḍe the line is on the west side of the high road to 25 miles 71 chains, where the main road is again crossed to get to the site of the Negombo station, distant 26 miles 7 chains from Chilaw, 14 miles 27 chains from Mahara, and 23 miles 31 chains from Colombo. This position was fixed upon for the station principally because there is a plot of land at this place belonging to Government, which can be partially utilised for the station buildings; and the site is, I think, a convenient one for the town generally. It is about a mile from the Government offices, but as those offices and the business part of Negombo are built on a promontory, the line could not have been taken into the heart of the town without making a long round and doing a large amount of damage to house property.

11. To the south of Negombo it was proposed, in order to effect a saving in the item of land, that the railway should be taken along the Selathahandiya-Alutapola road to the base line reservation, and then along the base line to Halgastoṭa. The District Road Committee, however, decided that the Selathahandiya-Alutapola road could not conveniently be given up for the railway; and upon examining the base line and surrounding country, I found that the cheapest line would be one direct from Negombo to Banḍárawatta, which is the best place for crossing the Danḍugam-oya. By the base line route, between Negombo and the base line, two long embankments would have been necessary, and on the base line itself there would have been two other embankments, while the direct line—the one adopted—is a surface line, for there is practically no earthwork between Negombo and Bánḍárawatta; and as it is, in addition, three-quarters of a mile shorter in distance, it is clear that it is very much the cheaper route.

12. Leaving Negombo, the line runs for three-quarters of a mile close to the edge of a broad road, which has very few houses on its frontage, and then for one mile along the side of a minor road, which is very little used; the latter is from 20 ft. to 30 ft. in width, but in many places the

actual clear track is only 5 ft. wide. The advantage of running along the edges of these roads is, that the small properties, which are numerous here, are not cut up, while at the same time the road traffic is not impeded.

13. At 29 miles 75 chains there is a station for Kurana-Kaṭunáyaka, which will also serve the estates of Kadirána, and at 32 miles 45 chains there is a station on the Sídúwa road for the villages of Mukalaṇgomuwa, Sídúwa, and Baṇḍárawatta.

14. At Baṇḍárawatta the Daṇḍugam-oya is crossed by a bridge of two 80 ft. and one 60 ft. spans, and then the line runs along the side of swamp and paddy lands nearly the whole way to Já-ęla. I have kept the line on the edge of the low land through this district to avoid the houses on the thickly-populated higher land. In all cases of passing over low lands the tops of embankments are above flood-level.

15. Já-ęla station is shown on the south side of the Ekala-road, about a quarter of a mile from the Já-ęla bazaar. The Já-ęla is crossed by a bridge of two 60 ft. spans. From Chilaw to Já-ęla the course of the line is through nearly flat country, but from Já-ęla to Mahara there are several small hills, which make it necessary to use sharper curves than have been required before. At Kandana (38 miles 35 chains) a station for passengers only has been provided for, but I am inclined to think it unnecessary, as Mahara station is only two miles away.

16. From Kandána the line runs in a south-easterly direction to Mahara station, where it joins the Main line at the upper end of the station at a point 9 miles 4 chains (nearly) from Colombo, the total length of the railway being 40 miles 34·24 chains.

CURVES AND GRADIENTS.

17. A list of the curves, straights, and gradients are given in the appendix. From these it will be seen that the straight portions of the line form 75·3 per cent., and the curves 24·7 per cent., of the whole length. The sharpest curve is one of 11·46 chains radius, at Mahara station.

18. Nearly 18 miles are on the level, and the steepest gradient is 1 in 99 at 19¼ miles, Nainamaḍama. A flatter gradient might be substituted for this, but it would increase the cost of earthwork and land. Land is valuable here, and the quantity necessary for a flatter gradient would be increased in two ways: the cutting would be deeper, and consequently a wider strip would be required for the slopes, and the amount "to spoil" would be much larger, and more land would be required to deposit it upon.

EARTHWORK.

19. The earthwork generally is light. The heaviest works are the embankments near Mádampé and the Maha-oya.

20. For the broad gauge calculations I have taken cuttings with a base 20 ft. wide and slopes 1 to 1 for earth, and for the cabook cuttings to the south of Já-ęla a base of 16 ft. wide with slopes ½ to 1. Embankments are 18 ft. wide at the top, with slopes 1½ to 1. The quantities and distribution of the earthwork for the broad gauge line are marked on the section.

21. In many of the long cuttings the material is shown to be thrown to spoil, although the adjacent banks require to be made up from side cutting; it will be seen that the reason for this is, that the cuttings are so long that the cost of leading the material to embankment would be greater than the cost of making up from side cutting.

22. I have priced the earthwork at 40c. a cubic yard, a price, I think, amply sufficient to include the cabook cuttings at the lower end. The bulk of earthwork is side cutting, for which the lead will be very short.

BRIDGES.

23. This is a heavy item in the estimate. There are five spans of 100 ft., five of 80 ft., and thirteen of 60 ft., besides a considerable number of 20 ft. and 12 ft. spans.

24. I have made a small scale drawing of the bridge for the Maha-oya to show the type proposed, which is similar to that of the bridges already built in similar parts of this country.

25. In order to gain headway the line has to be run between the main girders, so cross girders are necessary.

26. For bridges of more than one span, cylinder piers filled with cement concrete have been provided for. I had some borings taken at the Giṇ-oya and the Maha-oya, with the view of ascertaining how deep the cylinders would have to be sunk, but the boring apparatus, which was kindly lent me by the Director of Public Works, could not be got lower than about 20 ft., at which depth no material was found good enough for a foundation. I have estimated for cylinders of lengths varying from 40 ft. to 60 ft.

CULVERTS.

27. With one exception, I propose all the culverts to be open culverts of either 2 ft., 4 ft., or 6 ft. spans. The exception is a culvert at 36 miles 64 chains, where it will be economical to build a covered culvert, as the bank is 10 ft. high. I have estimated for a liberal amount of cement concrete in the foundations.

PERMANENT WAY.

28. Rails weighing 60 lb. to the yard have been estimated for. The ballast generally will be cabook gravel.

FENCING.

29. I have allowed for ten miles of wire-fencing and fifty miles of aloe or cactus hedge. The Assistant Government Agent, Negombo, informs me that fencing is not required in cocoanut and cinnamon estates, and that an aloe hedge is sufficient fence in the neighbourhood of villages. Still I think that in the neighbourhood of towns and villages some fencing will be required immediately the line is opened: so for such places I have entered the ten miles of wire-fencing. The cactus, I understand, grows high enough in one year to form an efficient fence.

LEVEL CROSSINGS.

30. The line crosses a great number of roads. For crossing main roads, level-crossings with double gates, signals, and lodge for gatekeeper are estimated for. For roads close to stations the signals and lodges will not be required. For small occupation roads I have provided single gates

only. Of this class of crossing there are 120. In order to save some of these, it might be practicable and economical in some places to take up an extra width of land, say 10 ft., for a roadway by the side of the railway, and give crossings at each half mile or so only. Such a road would not require metalling.

METALLING ROADS.

31. This item is for road approaches to stations.

STATIONS.

32. I have consulted the Assistant Government Agents at Negombo and Puttalam as to the positions and sizes of the stations, and they consider that twelve stations will be required, as under :—

Kandána	...	Third class station, for passengers only.				
Já-ela	...	Second class station, for passengers and goods				
Sídúwa-road	...	Third	do.	do.		
Kurana-Kaṭunáyaka	...	Third	do.	do.		
Negombo	...	First	do.	do.		
Kochchikaḍé	...	Second	do.	do.		
Bólawatta	...	Third	do.	do.		
Wennappuwa	...	Second class station, for passengers; third class for goods.				
Máráwila	...	Third	do.	do.	second	do.
Mádampé	...	Second	do.	do.	second	do.
Kákkápalliya	...	Third	do.	do.	third	do.
Chilaw	...	First	do.	do.	first	do.

33. At Chilaw I have provided for a roof over the passenger station, an engine-house, and a turntable; at Chilaw and Negombo for water tanks, cranes, and weighbridges.

LAND.

34. I estimate the total acreage of land required for the railway, stations, side-cutting, and spoil banks to be 250 acres. The value of land between Mahara and Chilaw varies from Rs. 50 to Rs. 1,000 per acre, and I find that the average value of the land required for the railway is Rs. 450 per acre.

35. For compensation for the houses which would be destroyed or damaged, I have put down the sum of Rs. 6,000. Many of the houses that are in the way are small, and of so temporary a character that they could be pulled down and re-erected a few yards to the right or to the left, out of the way of the railway, at a very small expense.

BROAD GAUGE LINE.

36. The following is a summary of the estimate for a line on 5 ft. 6 in. gauge from Mahara to Chilaw, distance 40 miles 34·24 chains = 40·428 miles.

Way and Works.

		Rs.	c.
Earthwork	(appendix A)	129,459	60
Bridges	(do. D)	555,862	0
Culverts	(do. E)	39,432	0
Permanent way	(do. F)	1,122,629	77
Fencing	(do. G)	23,000	0
Level-crossings	(do. G)	46,700	0
Metalling roads	(do. G)	14,014	0
		1,931,097	37
	Add for Contingencies	193,109	73
	Total for Way and Works ...	2,124,207	10
	Or per mile	52,542	96

Land, Stations, Rolling Stock, &c.

		Rs.	c.
Land and compensation for house property	... ...	118,500	0
Stations (appendix G)	... ...	349,150	0
Telegraph, at Rs. 500 per mile	... ...	20,214	0
Engineering supervision	... ...	100,000	0
Rolling stock (appendix H)	... ...	512,400	0
Accommodation at Colombo station (appendix H)	... ...	70,000	0
		1,170,264	0
	Add for Contingencies	117,026	40
	Total ...	1,287,290	40
	Or per mile	31,841	55

Recapitulation.

Estimate for way and works	... ...	2,124,207	10
Estimate for land, stations, &c.	... ...	1,287,290	40
	Grand Total ...	3,411,497	50
Or per mile	... ...	84,384	52

METRE GAUGE LINE.

37. In accordance with the instructions contained in your letter No. 2, of the 5th February last, I also submit an estimate for this line on a narrow gauge.

38. The following instructions were given in the "Memorandum of Instructions for the Chief Engineer in charge of Surveys" by the Consulting Engineer, dated February 19, 1875 :—* "With very slight exceptions, the difference in cost between the two gauges will only be effected in elements depending on a difference in width of 2 ft. Adopting this view as the basis of calculation, the use of a 3 ft. 6 in. gauge would diminish by 2 ft. the width of land to be taken; the fencing and side drainage would remain the same; the rails and fittings would remain the same; the sleepers would be 2 ft. shorter; the ballast would be 2 ft. narrower; the cuttings and embankments would be diminished by a strip of earthwork 2 ft. wide; the wing walls of bridges would remain the same; stone abutments and piers and bridge platforms and cross girders might in many cases be reduced in width by 2 ft., but in many cases the lateral steadiness necessary in iron bridge tops requires them to be as wide as with a gauge of 5 ft. 6 in., and in such cases it is obvious that no reduction could be made in the width of stone abutments. Culverts would be 2 ft. shorter. In stations the ground required would be practically the same, and the stations with their fittings, water-supply, signals, telegraph, &c., may be assumed as the same. Carriage and goods sheds might be narrower, but they would have to be longer for the rolling stock for a gauge of 3 ft. 6 in., which indeed would involve an additional length of sidings which would go far to compensate for any saving in bridges."

39. In estimating for the metre gauge line I have followed those instructions. In the earthwork a strip 2·2 ft. wide has been deducted from the quantity calculated for the broad gauge line. In single span bridges the widths of the abutments and the lengths of the cross girders have been reduced 2·2 ft. In bridges of more than 1 ft. span the same quantities as for the broad gauge line have been taken. The culverts are reduced in length 2·2 ft. In the permanent way smaller sleepers and ballast, 2·2 ft. less in width, have been estimated for. The land is taken 2·2 ft. narrower, and a reduction has been made in the quantity required for side-cutting and spoil banks. The station estimate is unaltered.

40. If the narrow gauge be adopted, there are two plans for taking the traffic to and from Colombo to be considered :—

(*a*) Laying a third rail from Mahara to Colombo, thus having a mixed gauge.
(*b*) Breaking the gauge at Mahara station and transferring the traffic from one gauge to the other.

41. The following is an estimate for a metre gauge line with mixed gauge to Colombo :—

	Rs.	c.
Earthwork (appendix I)	118,955	60
Bridges	547,708	0
Culverts	35,858	0
Permanent way	993,664	45
Fencing	23,000	0
Level crossings	46,700	0
Metalling roads	14,014	0
	1,779,900	5
Add for Contingencies	177,990	0
Total for Way and Works... ...	1,957,890	5
Or per mile	48,429	6

Land, Stations, Rolling Stock, &c.

	Rs	c.
Land and compensation for house property	109,500	0
Stations	349,150	0
Telegraph at Rs. 500 per mile	20,214	0
Engineering supervision	100,000	0
Rolling stock (appendix J)	741,400	0
Laying third rail to Colombo and in Colombo station yard ...	112,000	0
Works at Colombo station	86,000	0
	1,518,264	0
Add for Contingencies	151,826	40
Total ...	1,670,090	40
Or per mile	41,310	24

Recapitulation.

Estimate for way and works	1,957,890	5
Estimate for land, stations, &c.	1,670,090	40
Grand Total	3,627,980	45
Or per mile	89,739	30

42. Estimate for a metre gauge line with break of gauge at Mahara :—

Way and works as before	1,957,890	5
Or per mile	48,429	6

* See Sessional Papers, 1875–1876, page 129, paragraphs 22 and 23.

Land, Stations, Rolling Stock, &c.

	Rs.	c.
Land and compensation for house property	109,500	0
Stations	349,150	0
Telegraph at Rs. 500 per mile	20,214	0
Engineering supervision	100,000	0
Rolling stock (appendix J)	741,400	0
Works at Mahara station	259,500	0
Total ...	1,579,764	0
Or per mile	39,075	98

Recapitulation.

Estimate for way and works	1,957,890	5
Estimate for land, rolling stock, &c.	1,579,764	0
Grand Total ...	3,537,654	5
Or per mile	87,505	4

43. In the event of the gauge being broken at Mahara the cost of transferring goods from one gauge to the other must be taken into account. This would be about 8c. a ton.

44. To enable the railway authorities to estimate the quantity of rolling stock which would be required, I applied to the Assistant Government Agents at Negombo and Puttalam for information respecting the probable amounts of goods traffic which might be expected on the railway. As the statistics which they furnished me with may be useful, I give them in the appendix.

45. The estimates for rolling stock and accommodation works at Colombo are based on information given me by the Locomotive Engineer and Traffic Superintendent of the Railway.

46. I desire to tender my thanks to the Assistant Government Agent, Negombo, the Assistant Government Agent, Puttalam, the Engineer of Way and Works, the Locomotive Engineer, and the Traffic Superintendent, for their courtesy in giving me assistance and valuable information.

47. The details of the plan have been surveyed by Mr. C. H. De Silva, who has diligently assisted me in the work.

I have, &c.,

H. OLIVER.

List of Plans and Papers accompanying Report.

One book { Key Plan of District between Colombo and Chilaw.
Plan and Longitudinal Section of Line, 41 sheets.
One Bridge Drawing.

For 5 ft. 6 in. Gauge, Appendix A.—Quantities and Distribution of Earthwork.
Do. do. B.—List of Straights and Curves.
Do. do. C.—List of Gradients.
Do. do. D.—Iron Girder Bridges: Quantities and Estimate.
Do. do. E.—Culverts: Quantities and Estimate.
Do. do. F.—Permanent Way: do.
Do. do. G.—Fencing, Level Crossings, Metalling Roads, and Stations.
Do. do. H.—Estimate of Rolling Stock.

For Metre Gauge do. I.—Quantities and Distribution of Earthwork.
Do. do. J.—Estimate of Rolling Stock, and Accommodation Works at Colombo and Mahara Stations.

Appendix K.—Statistics of Annual Exports and Imports.

APPENDIX.

A.—Quantities and Distribution of Earthwork. (5 ft. 6 in. Gauge.)

No. of Cutting or Embankment.		Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	No.	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Embankment ...	1 ...	2	8· 0	20,802	—	—	—	20,752	—
Cutting ...	1 ...	2	11· 0	—	50	50	—	—	50
Embankment ...	2 ...	3	3· 0	6,212	—	—	—	6,161	—
Cutting ...	2 ...	3	4· 0	—	51	51	—	—	51
Embankment ...	3 ...	3	39· 0	3,075	—	—	—	3,000	—
Cutting ...	3 ...	3	42· 0	—	75	75	—	—	75
Embankment ...	4 ...	3	46· 0	222	—	—	—	147	—
Cutting ...	4 ...	3	49· 0	—	75	75	—	—	75
Embankment ...	5 ...	4	46· 0	8,288	—	—	—	8,213	—
Cutting ...	5 ...	4	51· 0	—	75	75	—	—	75
Embankment ...	6 ...	4	69· 0	231	—	—	—	106	—
Cutting ...	6 ...	4	74· 0	—	125	125	—	—	125
Embankment ...	7 ...	5	7· 0	385	—	—	—	285	—
Cutting ...	7 ...	5	59· 0	—	452	100	352	—	452
Embankment ...	8 ...	5	68· 0	1,339	—	—	—	1,254	—
Cutting ...	8 ...	5	76· 0	—	200	200	—	—	200
Embankment ...	9 ...	6	1· 0	115	—	—	—	—	—
Cutting ...	9 ...	6	12· 0	—	122	122	—	—	122
Embankment ...	10 ...	6	30· 0	370	—	—	—	173	—
Cutting ...	10 ...	6	32· 0	—	75	75	—	—	75
Embankment ...	11 ...	6	37· 0	231	—	—	—	231	—
Cutting ...	11 ...	6	41· 0	—	13	13	—	—	13
Embankment ...	12 ...	6	42· 0	78	—	—	—	—	—
Cutting ...	12 ...	6	69· 0	—	1,025	75	950	—	1,025
Embankment ...	13 ...	6	69· 0	10	—	—	—	—	—
Cutting ...	13 ...	6	71· 0	—	50	50	—	—	50
Embankment ...	14 ...	7	7· 0	7,480	—	—	—	7,305	—
Cutting ..	14 ...	7	13· 0	—	125	125	—	—	125
Embankment ...	15 ...	7	21· 0	1,118	—	—	—	—	—
Cutting ...	15 ...	7	36· 0	—	1,938	1,938	—	—	1,938
Embankment ...	16 ...	8	65· 0	41,237	—	—	—	38,494	—
Cutting ...	16 ...	8	77· 0	—	1,923	1,923	—	—	1,923
Embankment ...	17 ...	9	10· 0	161	—	—	—	—	—
Cutting ...	17 ...	9	17· 0	—	200	200	—	—	200
Embankment ...	18 ...	9	30 0	667	—	—	—	—	—
Cutting ...	18 ...	9	45· 0	—	1,053	986	67	—	1,053
Embankment ...	19 ...	9	52· 0	358	—	—	—	—	—
Cutting ...	19 ...	9	63· 0	—	891	771	120	—	891
Embankment ...	20 ...	9	73· 0	771	—	—	—	—	—
Cutting ...	20 ...	10	7· 0	—	1,855	620	1,235	—	1,855
Embankment ...	21 ...	10	20· 0	620	—	—	—	—	—
Cutting ...	21 ...	10	42· 0	—	1,779	700	1,079	—	1,779
Embankment ...	22 ...	10	63· 0	1,778	—	—	—	—	—
Cutting ...	22 ...	10	76· 0	—	1,557	1,463	94	—	1,557
Embankment ...	23 ...	11	1· 0	385	—	—	—	—	—
Cutting ...	23 ...	11	5· 0	—	204	204	—	—	204
Embankment ...	24 ...	11	32· 0	2,750	—	—	—	2,546	—
Cutting ...	24 ...	11	39· 0	—	200	200	—	—	200
Embankment ...	25 ...	11	53· 0	438	—	—	—	—	—
Cutting ...	25 ...	12	1· 0	—	634	238	396	—	634
Embankment ...	26 ...	12	25 0	462	—	—	—	362	—
Cutting ...	26 ...	13	3· 0	—	900	200	700	—	900
Embankment ...	27 ...	13	13· 0	429	—	—	—	—	—
Cutting ...	27 ...	13	27· 0	—	820	820	—	—	820
Embankment ...	28 ...	13	52· 0	1,374	—	—	—	583	—
Cutting ...	28 ...	13	69· 0	—	1,885	1,300	585	—	1,885
Embankment ...	29 ...	14	18· 0	4,127	—	—	—	2,127	—
Cutting ...	29 ...	15	0· 0	—	4,153	1,300	2,853	—	4,153
Embankment ...	30 ...	15	28· 0	785	—	—	—	285	—
Cutting ...	30 ...	15	50· 0	—	955	600	355	—	955
Embankment ...	31 ...	15	66· 0	2,359	—	—	—	1,659	—
Cutting ...	31 ...	16	13· 0	—	1,177	400	777	—	1,177
Embankment ...	32 ...	16	22· 0	805	—	—	—	692	—
Cutting ...	32 ...	16	23· 0	—	13	13	—	—	13
Embankment ...	33 ...	16	27· 0	136	—	—	—	—	—
Cutting ...	33 ...	16	32· 0	—	152	152	—	—	152
Embankment ...	34 ...	16	44 0	416	—	—	—	162	—
Cutting ...	34 ...	16	56· 0	—	400	400	—	—	400
Embankment ...	35 ...	16	62· 0	162	—	—	—	—	—
Cutting ...	35 ...	17	47· 0	—	1,928	200	1,728	—	1,928
Embankment ...	36 ...	17	56 0	1,484	—	—	—	684	—
Cutting ...	36 ...	17	70· 0	—	1,257	670	587	—	1,257
Embankment ...	37 ...	17	73· 0	70	—	—	—	—	—
Cutting ...	37 ...	17	77· 0	—	204	204	—	—	204
Embankment ...	38 ...	18	4· 0	926	—	—	—	322	—
Cutting ...	38 ...	18	25· 0	—	1,738	700	1,038	—	1,738
Embankment ...	39 ...	18	34· 0	333	—	—	—	—	—
Cutting ...	39 ...	18	50· 0	—	375	33	342	—	375

No. of Cutting or Embankment.		Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	No.	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Embankment ...	40 ...	18	62· 0	669	—	—	—	469	—
Cutting ...	40 ...	19	34· 0	—	6,793	3,990	2,803	—	6,793
Embankment ...	41 ...	19	42· 0	3,790	—	—	—	—	—
Cutting ...	41 ...	19	44· 0	—	50	50	—	—	50
Embankment ...	42 ...	19	52· 0	1,118	—	—	—	368	—
Cutting ...	42 ...	19	67· 0	—	1,586	700	886	—	1,586
Embankment ...	43 ...	19	69 0	46	—	—	—	—	—
Cutting ...	43 ...	20	3· 0	—	5,543	1,624	3,919	—	5,543
Embankment ...	44 ...	20	5· 0	1,578	—	—	—	—	—
Do. ...	44*a* ...	20	44· 0	10,003	—	—	—	10,003	—
Cutting ...	44 ...	20	46· 0	—	50	50	—	—	50
Embankment ...	45 ...	20	67· 0	755	—	—	—	305	—
Cutting ...	45 ...	21	6 0	—	2,319	1,100	1,219	—	2,319
Embankment ...	46 ...	21	24· 0	3,244	—	—	—	2,394	—
Cutting ...	46 ...	21	29· 0	—	150	150	—	—	150
Embankment ...	47 ...	21	34 0	116	—	—	—	—	—
Cutting ...	47 ...	21	39· 0	—	125	125	—	—	125
Embankment ...	48 ...	21	45· 0	254	—	—	—	—	—
Cutting ...	48 ...	21	59· 0	—	926	445	481	—	926
Embankment ...	49 ...	22	14· 0	17,381	—	—	—	17,181	—
Do. ...	49*a* ...	22	37· 0	13,024	—	—	—	11,424	—
Cutting ...	49 ...	22	70· 0	—	4,695	2,100	2,595	—	4,695
Embankment ...	50 ...	23	2 0	2,849	—	—	—	1,749	—
Cutting ...	50 ...	23	39· 0	—	2,361	800	1,561	—	2,361
Embankment ...	51 ...	23	49· 0	1,626	—	—	—	1,226	—
Cutting ...	51 ...	23	74· 0	—	755	500	255	—	755
Embankment ...	52 ...	24	3· 0	1,442	—	—	—	987	—
Cutting ...	52 ...	24	7· 0	—	155	155	—	—	155
Embankment ...	53 ...	24	18· 0	2,598	—	—	—	2,198	—
Cutting ...	53 ...	24	37· 0	—	1,974	470	1,504	—	1,974
Embankment ...	54 ...	24	40· 0	70	—	—	—	—	—
Cutting ...	54 ...	24	45· 0	—	125	125	—	—	125
Embankment ...	55 ...	24	58· 0	1,089	—	—	—	889	—
Cutting ...	55 ...	24	60· 0	—	75	75	—	—	75
Embankment ...	56 ...	25	12· 0	7,133	—	—	—	6,733	—
Cutting ...	56 ...	25	44· 0	—	1,914	400	1,514	—	1,914
Embankment ...	57 ...	25	49· 0	128	—	—	—	91	—
Cutting ...	57 ...	25	51· 0	—	37	37	—	—	37
Embankment ...	58 ...	25	66· 0	790	—	—	—	740	—
Cutting ...	58 ...	25	71· 0	—	50	50	—	—	50
Embankment ...	59 ...	26	6· 0	675	—	—	—	575	—
Cutting ...	59 ...	26	11· 0	—	100	100	—	—	100
Embankment ...	60 ...	26	32· 0	799	—	—	—	493	—
Cutting ...	60 ...	26	39. 0	—	306	306	—	—	306
Embankment ...	61 ...	26	43 0	46	—	—	—	—	—
Cutting ...	61 ...	27	16· 0	—	700	46	654	—	700
Embankment ...	62 ...	27	21· 0	109	—	—	—	—	—
Cutting ...	62 ...	27	39· 0	—	411	411	—	—	411
Embankment ...	63 ...	27	59· 0	858	—	—	—	406	—
Cutting ...	63 ...	28	13· 0	—	727	341	386	—	727
Embankment ...	64 ...	28	25· 0	191	—	—	—	—	—
Cutting ...	64 ...	28	52· 0	—	300	—	300	—	300
Embankment ...	65 ...	28	62· 0	197	—	—	—	147	—
Cutting ...	65 ...	28	71· 0	—	83	83	—	—	83
Embankment ...	66 ...	28	71· 0	69	—	—	—	—	—
Cutting ...	66 ...	28	77· 0	—	76	76	—	—	76
Embankment ...	67 ...	29	3· 0	92	—	—	—	—	—
Cutting ...	67 ...	29	15· 0	—	400	98	302	—	400
Embankment ...	68 ...	29	19· 0	46	—	—	—	—	—
Cutting ...	68 ...	29	20· 0	—	26	26	—	—	26
Embankment ...	69 ...	30	31· 0	2,575	—	—	—	2,449	—
Cutting ...	69 ...	30	68· 0	—	825	100	725	—	825
Embankment ...	70 ...	30	78· 0	92	—	—	—	—	—
Cutting ...	70 ...	31	1· 0	—	100	100	—	—	100
Embankment ...	71 ...	31	24· 0	230	—	—	—	192	—
Cutting ...	71 ...	31	32· 0	—	75	75	—	—	75
Embankment ...	72 ...	32	2· 0	831	—	—	—	786	—
Cutting ...	72 ...	32	50· 0	—	400	—	400	—	400
Embankment ...	73 ...	32	51· 0	56	—	—	—	—	—
Cutting ...	73 ...	32	61· 0	—	100	100	—	—	100
Embankment ...	74 ...	32	71· 0	161	—	—	—	75	—
Cutting ...	74 ...	32	72· 0	—	42	42	—	—	42
Embankment ...	75 ...	32	72· 0	25	—	—	—	—	—
Cutting ...	75 ...	33	6· 0	—	1,528	462	1,066	—	1,528
Embankment ...	76 ...	33	8· 0	437	—	—	—	—	—
Do. ...	76*a* ...	33	28· 0	6,819	—	—	—	6,819	—
Cutting ...	76 ...	33	34· 0	—	150	150	—	—	150
Embankment ...	77 ...	34	0· 0	8,603	—	—	—	8,453	—
Cutting ...	77 ...	34	3· 0	—	153	153	—	—	153
Embankment ...	78 ...	34	22· 0	3,046	—	—	—	2,689	—
Cutting ...	78 ...	34	25· 0	—	204	204	—	—	204
Embankment ...	79 ...	34	39· 0	1,743	—	—	—	1,543	—
Cutting ...	79 ...	34	52· 0	—	981	981	—	—	981
Embankment ...	80 ...	34	59· 0	1,074	—	—	—	293	—

No. of Cutting or Embankment.		Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	No.	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Cutting ...	80 ...	34	62·0	—	113	113	—	—	113
Embankment ...	81 ...	34	73·0	1,680	—	—	—	967	—
Cutting ...	81 ...	35	8·0	—	1,945	1,486	459	—	1,945
Embankment ...	82 ...	35	13·0	886	—	—	—	—	—
Cutting ...	82 ...	35	17·0	—	113	113	—	—	113
Embankment ...	83 ...	35	31·0	1,302	—	—	—	689	—
Cutting ...	83 ...	35	48·0	—	1,355	545	810	—	1,355
Embankment ...	84 ...	35	50·0	95	—	—	—	—	—
Cutting ...	84 ...	35	52·0	—	50	50	—	—	50
Embankment ...	85 ...	35	62·0	2,388	—	—	—	2,088	—
Cutting ...	85 ...	36	7·0	—	1,841	500	1,341	—	1,841
Embankment ...	86 ...	36	10·0	483*	—	—	—	—	—
Do. ...	86a ...	36	15·0	360	—	—	—	—	—
Cutting ...	86 ...	36	36·0	—	3,633	816	2,817	—	3,633
Embankment ...	87 ...	36	42·0	456	—	—	—	—	—
Cutting ...	87 ...	36	45·0	—	78	78	—	—	78
Embankment ...	88 ...	36	55·0	343	—	—	—	—	—
Cutting ...	88 ...	36	61·0	—	376	376	—	—	376
Embankment ...	89 ...	36	66·0	1,158	—	—	—	447	—
Cutting ...	89 ...	36	72·0	—	600	600	—	—	600
Embankment ...	90 ...	36	76·0	191	—	—	—	—	—
Cutting ...	90 ...	37	24·0	—	772	391	381	—	772
Embankment ...	91 ...	37	34·0	381	—	—	—	—	—
Cutting ...	91 ...	37	49·0	—	1,050	381	669	—	1,050
Embankment ...	92 ...	37	65·0	3,861	—	—	—	2,161	—
Cutting ...	92 ...	37	74·0	—	3,363	1,892	1,471	—	3,363
Embankment ...	93 ...	37	78·0	392	—	—	—	—	—
Cutting ...	93 ...	38	4·0	—	947	947	—	—	947
Embankment ...	94 ...	38	12·0	1,226	—	—	—	—	—
Cutting ...	94 ...	38	22·0	—	598	598	—	—	598
Embankment ...	95 ...	38	38·0	2,143	—	—	—	1,524	—
Cutting ...	95 ...	38	48·0	—	446	370	76	—	446
Embankment ...	96 ...	38	51·0	70	—	—	—	—	—
Cutting ...	96 ...	38	62·0	—	440	—	440	—	440
Embankment ...	97 ...	38	66·0	92	—	—	—	—	—
Cutting ...	97 ...	38	74·0	—	522	136	386	—	522
Embankment ...	98 ...	39	1·0	308	—	—	—	—	—
Cutting ...	98 ...	39	5·0	—	336	336	—	—	336
Embankment ...	99 ...	39	7·0	72	—	—	—	—	—
Cutting ...	99 ...	39	12·0	—	412	200	212	—	412
Embankment ...	100 ...	39	16·0	326	—	—	—	—	—
Cutting ...	100 ...	39	23·0	—	645	226	419	—	645
Embankment ...	101 ...	39	42·0	2,873	—	—	—	1,724	—
Cutting ...	101 ...	39	49·0	—	2549	2,549	—	—	2,549
Embankment ...	102 ...	39	55·0	3,668	—	—	—	527	—
Cutting ...	102 ...	39	61·0	—	*1,941	1,941	—	—	1,941
Embankment ...	103 ...	39	70·0	703	—	—	—	—	—
Cutting ...	103 ...	39	78·0	—	2,559	851	1,708	—	2,559
Embankment ...	104 ...	40	5·0	448	—	—	—	—	—
Cutting ...	104 ...	40	10·0	—	109	109	—	—	109
Embankment ...	105 ...	40	22·0	4,528	—	—	—	2,419	—
Cutting ...	105 ...	40	34·24	—	2,766	2,000	766	—	2,766
Total ...		—		241,899	97,633	51,850	45,783	189,766	97,633

ABSTRACT OF EARTHWORK

Description.	Earth. c. yds.
Cube of cutting	97,633
Cube of side cutting	189,766
Additional earthwork at stations, including road approaches ...	15,250
Side ditches	16,000
Road diversions	5,000
Total ...	323,649

	Rs.	c.
Total quantities of excavation from all sources—323,649 cubic yards earth cutting, at 40c. per cubic yard	129,459	60

* 283 cubic yards from station cutting is included.

B.—List of Straights and Curves. (5 ft. 6 in. Gauge.)

Distance from	Distance to	Radius of Curve.	Direction of Curve.	Length of Curve.	Length of Straight.	Distance from	Distance to	Radius of Curve.	Direction of Curve.	Length of Curve.	Length of Straight.
M. ch.	M. ch.	Chains.		Chains.	Chains.	M. ch.	M. ch.	Chains.		Chains.	Chains.
25 9·0	25 67·90	—	—	—	58·90	35 26·0	35 45·0	42·97	L	19·0	—
25 67·90	26 1·23	19·10	L	13·33	—	35 45·0	35 48·0	—	—	—	3·0
26 1·23	26 14·0	—	—	—	12·77	35 48·0	35 63·0	34·38	R	15·0	—
26 14·0	26 21·33	19·10	L	7·33	—	35 63·0	36 13·50	—	—	—	30·50
26 21·33	26 53·21	—	—	—	31·88	36 13·50	36 19·50	19·10	R	6·0	—
26 53·21	26 74·10	57·29	R	20·89	—	36 19·50	36 39·75	—	—	—	20·25
26 74·10	28 43·20	—	—	—	129·10	36 39·75	36 55·75	57·29	L	16·0	—
28 43·20	28 51·20	114·59	R	8·0	—	36 55·75	36 65·70	—	—	—	9·95
28 51·20	29 48·0	—	—	—	76·80	36 65·70	36 75·70	57·29	L	10·0	—
29 48·0	29 54·0	57·29	L	6·0	—	36 75·70	37 11·0	—	—	—	15·30
29 54·0	30 2·0	—	—	—	28·0	37 11·0	37 16·0	57·29	R	5·0	—
30 2·0	30 11·0	57·29	R	9·0	—	37 16·0	37 47·0	—	—	—	31·0
30 11·0	31 15·0	—	—	—	84·0	37 47·0	37 63·0	28·65	L	16·0	—
31 15·0	31 29·0	57·29	R	14·0	—	37 63·0	37 71·0	—	—	—	8·0
31 29·0	31 51·50	—	—	—	22·50	37 71·0	38 1·50	14·32	R	10·50	—
31 51·50	31 63·0	57·29	L	11·50	—	38 1·50	38 18·20	—	—	—	16·70
31 63·0	32 62·0	—	—	—	79·0	38 18·20	38 30·20	19·10	L	12·0	—
32 62·0	32 68·0	57·29	L	6·0	—	38 30·20	38 50·50	—	—	—	20·30
32 68·0	33 25·0	—	—	—	37·0	38 50·50	38 57·50	57·29	R	7·0	—
33 25·0	33 36·0	57·29	R	11·0	—	38 57·50	38 66·50	—	—	—	9·0
33 36·0	33 61·0	—	—	—	25·0	38 66·50	38 79·0	28·65	L	12·50	—
33 61·0	33 69·0	114·59	L	8·0	—	38 79·0	39 5·50	—	—	—	6·50
33 69·0	34 26·0	—	—	—	37·0	39 5·50	39 13·90	34·38	R	8·40	—
34 26·0	34 32·0	57·29	L	6·0	—	39 13·90	39 30·35	—	—	—	16·45
34 32·0	34 51·0	—	—	—	19·0	39 30·35	39 38·35	14·32	L	8·0	—
34 51·0	34 61·0	28·65	R	10·0	—	39 38·35	39 41·0	—	—	—	2·65
34 61·0	35 9·0	—	—	—	28·0	39 41·0	39 57·0	19·10	R	16·0	—
35 9·0	35 17·20	57·29	L	8·20	—	39 57·0	39 72·0	—	—	—	15·0
35 17·20	35 26·0	—	—	—	8·80	39 72·0	40 3·0	14·32	L	11·0	—
—	0 44·50	—	—	—	44·50	16 35·50	16 51·50	114·59	L	16·0	—
0 44·50	0 61·50	57·29	L	17·0	—	16 51·50	17 29·10	—	—	—	57·60
0 61·50	3 16·50	—	—	—	195·0	17 29·10	17 43·10	38·20	R	14·0	—
3 16·50	3 23·50	57·29	R	7·0	—	17 43·10	17 50·30	—	—	—	7·20
3 23·50	4 34·35	—	—	—	90·85	17 50·30	17 59·05	57·29	L	8·75	—
4 34·35	4 51·0	38·20	R	16·65	—	17 59·05	18 40·50	—	—	—	61·45
4 51·0	6 27·60	—	—	—	136·60	18 40·50	18 47·50	57·29	L	7·0	—
6 27·60	6 72·70	57·29	L	45·10	—	18 47·50	19 53·72	—	—	—	86·22
6 72·70	7 2·0	—	—	—	9·30	19 53·72	19 71·47	28·65	R	17·75	—
7 2·0	7 12·0	28·65	R	10·0	—	19 71·47	19 78·60	—	—	—	7·13
7 12·0	7 44·60	—	—	—	32·60	19 78·60	20 4·43	19·10	L	5·83	—
7 44·60	7 60·26	28·65	R	15·66	—	20 4·43	20 12·05	—	—	—	7·62
7 60·26	8 15·30	—	—	—	35·4	20 12·05	20 23·80	28·65	L	11·75	—
8 15·30	8 22·80	57·29	R	7·50	—	20 23·80	20 46·30	—	—	—	22·50
8 22·80	8 69·70	—	—	—	46·90	20 46·30	20 62·30	57·29	R	16·0	—
8 69·70	9 9·20	28·65	L	19·50	—	20 62·30	20 72·50	—	—	—	10·20
9 9·20	9 25·85	—	—	—	16·65	20 72·50	21 10·0	57·29	L	17·50	—
9 25·85	9 35·40	28·65	R	9·55	—	21 10·0	21 69·40	—	—	—	59·40
9 35·40	9 52·40	—	—	—	17·0	21 69·40	22 13·40	34·38	R	24·0	—
9 52·40	9 62·40	57·29	R	10·0	—	22 13·40	22 28·10	—	—	—	14·70
9 62·40	10 40·0	—	—	—	57·60	22 28·10	22 38·10	38·20	R	10·0	—
10 40·0	10 61·0	85·94	L	21·0	—	22 38·10	22 49·70	—	—	—	11·60
10 61·0	11 9·50	—	—	—	28·50	22 49·70	22 59·70	57·29	L	10·0	—
11 9·50	11 28·0	57·29	R	18·50	—	22 59·70	23 8·0	—	—	—	28·30
11 28·0	13 34·0	—	—	—	166·0	23 8·0	23 12·50	57·29	R	4·50	—
13 34·0	13 52·0	57·29	R	18·0	—	23 12·50	24 9·20	—	—	—	76·70
13 52·0	14 1·45	—	—	—	29·45	24 9·20	24 44·30	49·11	L	35·10	—
14 1·45	14 40·61	57·29	L	39·16	—	24 44·30	24 67·90	—	—	—	23·60
14 40·61	16 35·50	—	—	—	154·89	24 67·90	25 9·0	38·20	R	21·10	—
40 3·0	40 21·19	—	—	—	18·19	40 21·19	40 34·24	11·46	R	13·05	—

Abstract.

	M.	c.		Per cent.
Total length of line	40	34·24	...	—
Total length of straights	30	35·64	...	75·3
Total length of curves	9	78·60	...	24·7

					Chains.
1 curve of 11·46 chains radius in length	...	...	...	...	13·05
3 „ 14·32	„	...	...	...	29·50
6 „ 19·10	„	...	...	...	60·49
9 „ 28·65	„	...	...	...	122·71
3 „ 34·38	„	...	...	...	47·40
4 „ 38·20	„	...	...	...	61·75
1 „ 42·97	„	...	...	...	19·0
1 „ 49·11	„	...	...	...	35·10
27 „ 57·29	„	...	...	...	356·60
1 „ 85·94	„	...	...	...	21·0
3 „ 114·59	„	...	...	...	32·0
					798·60

C.—List of Gradients. (5 ft. 6 in. Gauge.)

From		Height above datum.	To		Height above datum.	Length.		Gradient.	Per Chain.
M.	ch.		M.	ch.		M.	ch.		
—	—	94·50	4	56· 0	94·50	4	56· 0	Level	—
4	56· 0	94·50	4	74· 0	97·50	0	18· 0	1 in 396	0·166
4	74· 0	97·50	5	67· 0	97·50	0	73· 0	Level	—
5	67· 0	97 50	6	5· 0	102 0	0	18· 0	1 in 264	0·25
6	5· 0	102· 0	6	61· 0	102· 0	0	56· 0	Level	—
6	61· 0	102· 0	7	2· 0	99· 0	0	21· 0	1 in 462	0·1428
7	2· 0	99· 0	7	32· 0	102· 0	0	30· 0	1 in 660	0·10
7	32· 0	102· 0	7	50· 0	99· 0	0	18· 0	1 in 396	0·166
7	50· 0	99· 0	8	57· 0	99· 0	1	7· 0	Level	—
8	57· 0	99· 0	8	76· 0	108·50	0	19· 0	1 in 132	0·50
8	76· 0	108·50	9	19· 0	108·50	0	23· 0	Level	—
9	19· 0	108·50	9	56·50	121 0	0	37·50	1 in 198	0·33
9	56·50	121· 0	9	78· 0	121· 0	0	21·50	Level	—
9	78· 0	121· 0	10	48 0	116· 0	0	50· 0	1 in 660	0·10
10	48· 0	116· 0	10	71· 0	116· 0	0	23· 0	Level	—
10	71· 0	116· 0	11	7 0	108 0	0	16· 0	1 in 132	0·50
11	7· 0	108· 0	11	21·25	108· 0	0	14·25	Level	—
11	21·25	108· 0	11	62·50	124·50	0	41·25	1 in 165	0·40
11	62·50	124·50	11	78· 0	124·50	0	15·50	Level	—
11	78· 0	124·50	13	8· 0	120· 0	1	10· 0	1 in 1320	0·05
13	8· 0	120 0	13	60· 0	107· 0	0	52· 0	1 in 264	0·25
13	60· 0	107· 0	14	9 0	107· 0	0	29· 0	Level	—
14	9· 0	107· 0	14	43·50	118·50	0	34·50	1 in 198	0·33
14	43·50	118·50	15	20· 0	118·50	0	56·50	Level	—
15	20· 0	118·50	16	30· 0	109·50	1	10· 0	1 in 660	0·10
16	30· 0	109·50	16	49·50	116· 0	0	19·50	1 in 198	0·33
16	49 50	116· 0	17	19·50	119· 0	0	50· 0	1 in 1100	0·06
17	19·50	119· 0	17	52 50	113·50	0	33· 0	1 in 396	0·166
17	52 50	113·50	18	17·50	118· 0	0	45· 0	1 in 660	0·10
18	17·50	118· 0	18	44· 0	118· 0	0	26·50	Level	—
18	44· 0	118· 0	19	10 0	120·30	0	46· 0	1 in 1320	0·05
19	10 0	120·30	19	35·95	103 0	0	25·95	1 in 99	0·66
19	35·95	103· 0	19	44· 0	103· 0	0	8· 5	Level	—
19	44· 0	103· 0	19	69 0	113· 0	0	25· 0	1 in 165	0·40
19	69 0	113· 0	20	12 33	99· 0	0	23·33	1 in 110	0·60
20	12·33	99· 0	20	56·67	99· 0	0	44·34	Level	—
20	56·67	99· 0	21	—	106· 0	0	23·33	1 in 220	0·30
21	—	106· 0	21	24· 0	103· 0	0	24· 0	1 in 528	0·125
21	24 0	103· 0	21	71· 0	103· 0	0	47· 0	Level	—
21	71· 0	103· 0	22	12· 0	110· 0	0	21· 0	1 in 198	0·33
22	12· 0	110· 0	22	35· 0	110· 0	0	23· 0	Level	—
22	35 0	110· 0	22	51· 0	114 0	0	16· 0	1 in 264	0·25
22	51· 0	114· 0	23	61· 0	111·75	1	10 0	1 in 2640	0·025
23	61· 0	111·75	24	44·75	99 0	0	63·75	1 in 330	0·20
24	44·75	99· 0	25	10· 0	99· 0	0	45·25	Level	—
25	10 0	99· 0	25	26·50	104 50	0	16 50	1 in 198	0·33
25	26·50	104·50	25	60·50	96· 0	0	34 0	1 in 264	0·25
25	60·50	96· 0	26	32· 0	96· 0	0	51 50	Level	—
26	32· 0	96· 0	26	52· 0	100· 0	0	20· 0	1 in 330	0·20
26	52· 0	100· 0	27	15· 0	100· 0	0	43· 0	Level	—
27	15· 0	100· 0	27	30· 0	105· 0	0	15· 0	1 in 198	0·33
27	30· 0	105· 0	27	45 0	102·50	0	15· 0	1 in 396	0·166
27	45· 0	102·50	29	25· 0	106· 0	1	60· 0	1 in 2640	0·025
29	25· 0	106· 0	31	—	106 0	1	55· 0	Level	—
31	—	106· 0	32	72· 0	102·20	1	72· 0	1 in 2640	0·025
32	72· 0	102·20	33	33· 0	94· 0	0	41· 0	1 in 330	0·20
33	33· 0	94· 0	35	—	94· 0	1	47· 0	Level	—
35	—	94· 0	35	50· 0	99· 0	0	50· 0	1 in 660	0·10
35	50· 0	99· 0	35	74· 0	105· 0	0	24 0	1 in 264	0·25
35	74· 0	105· 0	36	30· 0	108 0	0	36· 0	1 in 792	0·083
36	30· 0	108 0	36	62· 0	108· 0	0	32· 0	Level	—
36	62· 0	108· 0	37	15· 0	119· 0	0	33· 0	1 in 198	0·33
37	15· 0	119· 0	37	50· 0	112· 0	0	35· 0	1 in 330	0·20
37	50· 0	112 0	38	30· 0	106 0	0	60· 0	1 in 660	0·10
38	30· 0	106· 0	39	—	111· 0	0	50· 0	1 in 660	0·10
39	—	111· 0	39	53· 0	111· 0	0	53· 0	Level	—
39	53· 0	111· 0	40	12· 0	98· 0	0	39· 0	1 in 198	0 33
40	12· 0	98· 0	40	34·24	98· 6	0	22·24	Level	—

ABSTRACT OF GRADIENTS.

		M.	ch.			M.	ch.
Level	...	17	72·63	1 in 264	...	1	64· 0
1 in 2640	...	4	62· 0	1 in 220	...	0	23·33
1 in 1320	...	1	56 0	1 in 198	...	2	56 0
1 in 1100	...	0	50 0	1 in 165	...	0	66·25
1 in 792	...	0	36· 0	1 in 132	...	0	35· 0
1 in 660	...	4	55· 0	1 in 110	...	0	23·33
1 in 528	...	0	24· 0	1 in 99	...	0	25·95
1 in 462	...	0	21· 0				
1 in 396	...	1	4· 0			40	34·24
1 in 330	...	1	79·75				

D.—Iron Girder Bridges—Quantities and Estimate. (5 ft. 6 in. Gauge.)

Number.	Distance.	Description Spans.	Cement concrete in foundations and Cylinders.	Ordinary Masonry or Brickwork.	Coping in Cement.	Wrought Iron in Girders and Diaphragm bracing between Cylinders.	Cast iron in Cylinders, Caps, and Bed-plates.	Timber.	Cost.
	M. ch.	Ft.	C. yards.	C. yards.	C. yards.	Tons.	Tons.	C. ft.	Rs. c.
1	0 17·0	20	20	24	1·0	2·0	—	20	1,388 0
2	0 52·0	20	20	24	1·0	2·0	—	20	1,388 0
3	0 70·0	20	20	27	1·0	2·0	—	20	1,424 0
4	1 22·0	20	20	24	1·0	2·0	—	20	1,388 0
5	1 54·0	20	20	24	1·0	2·0	—	20	1,388 0
6	2 40 0	20	20	24	1·0	2·0	—	20	1,388 0
7	2 70·0	20	20	24	1·0	2·0	—	20	1,388 0
8	3 24·0	20	20	24	1·0	2 0	—	20	1,388 0
9	3 67·0	20	20	24	1·0	2·0	—	20	1,388 0
10	4 22·0	20	20	27	1·0	2·0	—	20	1,424 0
11	5 64·0	12	35	51	1·5	1 0	—	12	1,690 0
12	6 73 0	60	54	142	2·0	24·0	0·8	70	10,584 0
13	7 54·0	60	62	109	1·6	24·0	0 8	70	10,340 0
14	8 5·0	3/60	368	46	0·7	76·0	100·0	200	66,526 0
15	8 28·0	60	81	70	0·5	24 0	0·8	70	10,230 0
16	8 47·0	60	70	111	1·3	24·0	0 8	70	10,518 0
17	9 47·0	12	30	51	1·5	1·0	—	12	1,590 0
18	11 10·0	12	35	51	1·5	1·0	—	12	1,690 0
19	14 8 0	12	30	51	1·5	1·0	—	12	1,590 0
20	19 38·0	12	45	120	2·0	1·0	—	12	2,728 0
21	20 6·0	3/80	380	172	3·0	109 0	96·0	262	77,072 0
22	22 1·0	60	96	163	3·0	24·0	0·8	70	11,696 0
23	22 18·0	5/100	600	188	2·5	276·0	230 0	1,080	181,926 0
24	22 31·0	60	152	240	3·7	24·0	0·8	70	13,754 0
25	23 45·0	12	35	51	1·5	1·0	—	12	1,690 0
26	25 5·0	60	48	116	1·6	24·0	0·8	70	10,144 0
27	28 61 0	12	35	120	1·0	1·0	—	12	2,508 0
28	33 9·50	2/80 & 1/60	297	102	1·0	102·0	104·0	240	75,144 0
29	33 25 0	20	40	51	1·0	2·0	—	20	2,112 0
30	33 58·0	20	40	51	1·0	2·0	—	20	2,112 0
31	34 10·0	12	35	51	1·5	1·0	—	12	1,690 0
32	34 35·0	12	35	51	1·5	1·0	—	12	1,690 0
33	34 55·0	12	35	51	1·5	1·0	—	12	1,690 0
34	34 67·0	12	35	51	1·5	1·0	—	12	1,690 0
35	35 29·0	12	30	51	1·5	1·0	—	12	1,590 0
36	36 12·0	2/60	102	110	1·7	52·0	39·0	135	33,184 0
37	39 51·0	20	35	120	2·0	2·0	—	20	2,860 0
38	40 12·0	20	28	51	1·0	2 0	—	20	1,872 0
		Total	3,068	2,838	55·6	823·0	574·6	2,831	555,862 0

ESTIMATE.

Description.	Quantities. C. yards.	Rates. Rs. c.	Per.	Amount. Rs. c.
Cement concrete in foundations and cylinder piers ...	3,068	20 0	C. yard	61,360 0
Ordinary masonry or brickwork in abutments and wing walls	2,838	12 0	„	34,056 0
Coping in cement mortar ...	55·6	20 0	„	1,112 0
Wrought iron in girders and diaphragm bracing between cylinders	Tons. 823	300 0	Ton	246,900 0
Cast iron in cylinder piers, caps, and girder bed-plates	574·6	350 0	„	201,110 0
Timber	C. ft. 2,831	4 0	C. foot	11,324 0
			Total ...	555,862 0

E.—Culverts—Quantities and Estimates. (5 ft. 6 in. Gauge.)

Number.	Distance.	Description.	Headway.	Cement Concrete.	Ordinary masonry or brickwork.	Coping in Cement.	Timber.	Ironwork.
	Miles. chains		Feet.	C. yards.	C. yards.	C. yards.	C. feet.	Tons.
1	4 46· 32	6 ft. open culvert	4	18	24	0·6	9	0·55
2	4 70· 34	4 do.	2	7	12	0·3	15	0·02
3	4 79· 27	4 do.	4	9	24	0·6	15	0·02
4	5 12 80	4 do.	2	7	12	0·3	15	0·02
5	5 40· 62	6 do.	2	7	12	0·3	9	0·55
6	5 45· 20	2 do.	2	7	12	0·3	9	0·01
7	6 8· 0	4 do.	2	7	12	0·3	15	0·02
8	6 41· 0	2 do.	3	8	18	0·5	9	0·01
9	7 18· 11	6 do.	6	26	43	1·0	9	0·55
10	9 5· 0	2 do.	1	7	12	0·3	9	0·01
11	9 23· 0	4 do.	3	8	18	0·5	15	0·02
12	9 51· 0	2 do.	1	7	12	0·3	9	0·01
13	9 70· 0	6 do.	4	9	24	0·6	9	0·55
14	10 14· 0	4 do.	2	7	12	0·3	15	0·02
15	10 50· 0	6 do.	3	8	18	0·5	9	0·55
16	10 78· 0	2 do.	4	18	24	0·6	9	0·01
17	11 40· 0	2 do.	1	7	12	0·3	9	0·01
18	12 22· 0	2 do.	1	7	12	0·3	9	0·01
19	13 9· 0	4 do.	4	9	24	0·6	15	0·02
20	13 45· 0	6 do.	2	7	12	0·3	9	0·55
21	13 71· 0	4 do.	6	13	43	1·0	15	0·02
22	15 14· 0	2 do.	2	7	12	0·3	9	0·01
23	15 53· 0	2 do.	4	9	24	0·6	9	0·01
24	16 20· 0	4 do.	4	9	24	0·6	15	0·02
25	16 60· 0	2 do.	1	7	12	0·3	9	0·01
26	17 52· 0	6 do.	5	10	30	0·8	9	0·55
27	18 —	2 do.	4	9	24	0·6	9	0·01
28	18 27· 0	2 do.	2	7	12	0·3	9	0·01
29	18 60· 0	2 do.	3	8	18	0·5	9	0·01
30	20 52· 0	2 do.	1	14	12	0·3	9	0·01
31	20 66· 0	2 do.	2	14	12	0·3	9	0·01
32	21 9· 0	6 do.	7	32	58	1·2	9	0·55
33	21 20· 0	2 do.	5	20	30	0·8	9	0·01
34	21 44· 0	2 do.	2	14	12	0·3	9	0·01
35	22 77· 0	6 do.	7	16	58	1·2	9	0·55
36	23 78· 0	6 do.	6	26	43	1·0	9	0·55
37	24 11 0	4 do.	7	32	58	1·2	15	0·02
38	24 39· 0	2 do.	2	7	12	0·3	9	0·01
39	24 53· 0	4 do.	5	20	30	0·8	15	0·02
40	25 49· 0	2 do.	1	7	12	0·3	9	0·01
41	25 75· 0	6 do.	6	26	43	1·0	9	0·55
42	25 71· 0	2 do.	1	7	12	0·3	9	0·01
43	25 75· 0	2 do.	2	14	12	0·3	9	0·01
44	26 12· 0	2 do.	2	14	12	0·3	9	0·01
45	26 19· 0	4 do.	5	20	30	0·8	15	0·02
46	26 26· 0	2 do.	1	7	12	0·3	9	0·01
47	26 29· 0	4 do.	3	16	18	0·5	15	0·02
48	26 56· 0	2 do.	1	7	12	0·3	9	0·01
49	26 73· 0	2 do.	2	7	12	0·3	9	0·01
50	27 6· 0	2 do.	2	7	12	0·3	9	0·01
51	27 14· 0	2 do.	1	7	12	0·3	9	0·01
52	27 45· 0	2 do.	1	7	12	0·3	9	0·01
53	27 49· 0	2 do.	2	7	12	0·3	9	0·01
54	28 16· 0	2 do.	2	7	12	0·3	9	0·01
55	29 19 0	2 do.	3	8	18	0·5	9	0·01
56	29 47· 0	2 do.	2	7	12	0·3	9	0·01
57	30 0· 0	2 do.	1	7	12	0·3	9	0·01
58	30 77· 0	2 do.	1	7	12	0·3	9	0·01
59	31 63· 0	2 do.	2	7	12	0·3	9	0·01
60	32 66· 0	2 do.	1	7	12	0·3	9	0·01
61	33 43· 0	4 do.	4	18	24	0·6	15	0·02
62	35 10· 0	6 do.	5	20	30	0·8	9	0·55
63	35 26· 0	2 do.	4	9	24	0·6	9	0·01
64	36 39· 0	2 do.	3	—	18	0·5	9	0·01
65	36 51· 0	2 do.	2	—	12	0·3	9	0·01
66	36 64 0	Double 2 ft. flat top.	10	25	73	—	—	—
67	36 75· 0	2 ft. open	2	—	12	0·3	9	0·01
68	37 32 0	2 do.	2	—	12	0·3	9	0·01
69	37 57· 0	4 do.	7	32	58	1·2	15	0·02
70	37 76· 0	2 do.	3	—	18	0·5	9	0·01
71	38 7· 0	2 do.	4	9	24	0·6	9	0·01
72	38 30· 0	4 do.	6	13	43	1·0	15	0·02
73	38 49 0	4 do.	1	—	12	0·3	15	0·02
74	38 64 0	4 do.	1	—	12	0·3	15	0·02
75	38 78· 0	4 do	2	—	12	0·3	15	0·02
76	39 6· 0	2 do.	2	—	12	0·3	9	0·01
77	39 14· 0	4 do.	2	—	12	0·3	15	0·02
78	39 40· 0	4 do.	7	16	58	1·2	15	0·02
79	39 69· 0	4 do.	3	—	18	0·5	15	0·02
80	40 2· 0	4 do.	2	—	12	0·3	15	0·02
				809	1,682	39·3	849	7·50

ESTIMATE.

Description.	Quantities.	Rates. Rs. c.	Per.	Amount. Rs. c.
	C. yds.			
Cement concrete in foundations ...	809 ...	20 0	C. yd. ...	16,180 0
Ordinary masonry or brickwork ...	1,682 ...	10 0	" ...	16,820 0
Coping in cement	39·3 ...	20 0	" ...	786 0
	C. ft.			
Timber	849 ...	4 0	C. foot ...	3,396 0
	Tons			
Ironwork	7·50 ...	300 0	Ton ...	2,250 0
			Total ...	39,432 0

F.—Estimate of the Cost of one mile of Permanent Way. (5 ft. 6 in Gauge).

Number.	Description.	Weight.	Total Weight per mile.	Rate	Amount.
		lb.	Tons.	Rs.	Rs c.
3,520 yds.	Steel rails 24 ft. long	60	94·28	100	9,428 0
880	Fish plates	9	3·54	130	460 20
1,760	Fish plates, bolts, and nuts ...	1·5	1·18	—	—
4,400	Dog spikes	¾	1·50	—	—
3,520	Fang bolts	3	4 70	—	—
			7·38	200	1,476 0
2,000	Sleepers delivered on work ...	—	—	4	8,000 0
			C. yards		
	Ballast	—	3,820	1	3,820 0
	Platelaying	—	—	—	1,760 0
	Transport	—	—	—	300 0
					25,244 20
	Add 10 per cent. for sidings ..	—	—	—	2,524 42
					27,768 62

Total length of Railway, 40·428 miles, Permanent Way. Total Cost, Rs. 1,122,629·77.

G.—Fencing, Level Crossings, Metalling Roads, and Stations. (5 ft. 6 in. Guage.)

Fencing.

	Rs. c.
Wire fencing, 10 miles, at Rs. 2,000	20,000 0
Aloe or cactus hedge, 50 miles, at Rs. 60...	3,000 0
Total ...	23,000 0

Level-Crossings.

No.		Rs c.
11	First class level-crossings, at Rs. 1,200	13,200 0
7	Second class level-crossings, at Rs. 500	3,500 0
20	Third class level-crossings, at Rs. 250	30,000 0
	Total ...	46,700 0

Metalling Roads.

	Rs. c.
Estimate, 28,028 superficial yards metalling, at Rs. 50	14,014 0

Stations.

	Rs. c.		
Chilaw	95,250 0	...	1st class
Kákkápalliya ...	17,850 0	...	3rd class
Mádampé	26,450 0	...	2nd class
Máráwila	23,150 0	...	3rd class passengers, 2nd class goods
Wonappuwa... ...	21,150 0	...	2nd class passengers, 3rd class goods
Bólawatta	17,850 0	...	3rd class
Kochchikade ...	26,450 0	...	2nd class
Negombo	52,700 0	...	1st class
Katunáyeka... ...	17,850 0	...	3rd class
Sidúwa-road ...	17,850 0	...	3rd class
Já-ela	26,450 0	...	2nd class
Kandána	6,150 0	...	3rd class for passengers only
Total ...	349,150 0		

H.—Estimate of Rolling Stock required. (5 ft. 6 in. Gauge.)

	Rate. Rs.	c.	Amount. Rs.	c.
6 Locomotive engines	32,000	0	192,000	0
4 First class carriages	4,400	0	17,600	0
8 Second do.	4,000	0	32,000	0
28 Third do. ...	3,000	0	84,000	0
10 Passenger break vans	3,000	0	30,000	0
75 Covered goods wagons	1,400	0	105,000	0
19 Open do.	1,200	0	22,800	0
6 Goods break vans	4,000	0	24,000	0
1 Travelling crane	5,000	0	5,000	0
Total ...			512,400	0

Additional Works and Accommodation at Colombo Station.

	Rs.	c.
Sidings, including points and crossings	12,000	0
Engine house and workshop	30,000	0
Addition to passenger platform and goods shed	28,000	0
Total ...	70,000	0

I.—Quantities and Distribution of Earthwork. (Metre Gauge.)

No. of Cutting or Embankment.	Ending at Miles.	chains.	Contents of Embankment. C. yards.	Contents of Cutting. C. yards.	Volume to Embankment. C. yards.	Volume to Spoil. C. yards.	Bank from Side cutting. C. yards.	Earth. C. yards.
Embankment ... 1 ...	2	8·0	18,709	—	—	—	18,664	—
Cutting ... 1 ...	2	11·0	—	45	45	—	—	45
Embankment ... 2 ...	3	3·0	5,579	—	—	—	5,533	—
Cutting ... 2 ...	3	4·0	—	46	46	—	—	46
Embankment ... 3 ...	3	39·0	2,758	—	—	—	2,691	—
Cutting ... 3 ...	3	42·0	—	67	67	—	—	67
Embankment ... 4 ...	3	46·0	198	—	—	—	131	—
Cutting ... 4 ...	3	49·0	—	67	67	—	—	67
Embankment ... 5 ...	4	46·0	7,452	—	—	—	7,385	—
Cutting ... 5 ...	4	51·0	—	67	67	—	—	67
Embankment ... 6 ...	4	69·0	205	—	—	—	93	—
Cutting ... 6 ...	4	74·0	—	112	112	—	—	112
Embankment ... 7 ...	5	7·0	344	—	—	—	254	—
Cutting ... 7 ...	5	59·0	—	405	90	315	—	405
Embankment ... 8 ...	5	68·0	1,219	—	—	—	1,142	—
Cutting ... 8 ...	5	76·0	—	179	77 102	—	—	179
Embankment ... 9 ...	6	1·0	102	—	—	—	—	—
Cutting ... 9 ...	6	12·0	—	110	110	—	—	110
Embankment ... 10 ...	6	30·0	328	—	—	—	151	—
Cutting ... 10 ...	6	32·0	—	67	67	—	—	67
Embankment ... 11 ...	6	37·0	206	—	—	—	206	—
Cutting ... 11 ...	6	41·0	—	12	12	—	—	12
Embankment ... 12 ...	6	42·0	70	—	—	—	—	—
Cutting ... 12 ...	6	69·0	—	917	58 9	850	—	917
Embankment ... 13 ...	6	69·0	9	—	—	—	—	—
Cutting ... 13 ...	6	71·0	—	45	45	—	—	45
Embankment ... 14 ...	7	7·0	6,929	—	—	—	6,772	—
Cutting ... 14 ...	7	13·0	—	112	112	—	—	112
Embankment ... 15 ...	7	21·0	1,011	—	—	—	—	—
Cutting ... 15 ...	7	36·0	—	1,752	1,011 741	—	—	1,752
Embankment ... 16 ...	8	65·0	38,028	—	—	—	35,551	—
Cutting ... 16 ...	8	77·0	—	1,736	1,736	—	—	1,736
Embankment ... 17 ...	9	10·0	143	—	—	—	—	—
Cutting ... 17 ...	9	17·0	—	179	143 36	—	—	179
Embankment ... 18 ...	9	30·0	593	—	—	—	—	—
Cutting ... 18 ...	9	45·0	—	947	557 318	72	—	947
Embankment ... 19 ...	9	52·0	318	—	—	—	—	—
Cutting ... 19 ...	9	63·0	—	802	690	112	—	802
Embankment ... 20 ...	9	73·0	690	—	—	—	—	—
Cutting ... 20 ...	10	7·0	—	1,671	551	1,120	—	1,671
Embankment ... 21 ...	10	20·0	551	—	—	—	—	—
Cutting ... 21 ...	10	42·0	—	1,602	630	972	—	1,602
Embankment ... 22 ...	10	63·0	1,595	—	—	—	—	—
Cutting ... 22 ...	10	76·0	—	1,407	965 344	98	—	1,407
Embankment ... 23 ...	11	1·0	344	—	—	—	—	—
Cutting ... 23 ...	11	5·0	—	183	183	—	—	183
Embankment ... 24 ...	11	32·0	2,489	—	—	—	2,306	—
Cutting ... 24 ...	11	39·0	—	179	179	—	—	179
Embankment ... 25 ...	11	53·0	388	—	—	—	—	—
Cutting ... 25 ...	12	1·0	—	568	209	359	—	568
Embankment ... 26 ...	12	25·0	409	—	—	—	319	—
Cutting ... 26 ...	13	3·0	—	805	90 90	625	—	805

No. of Cutting or Embankment.	Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Embankment ... 27 ...	13	13 0	382	—	—	—	—	—
Cutting ... 27 ...	13	27· 0	—	736	292 444	—	—	736
Embankment ... 28 ...	13	52· 0	1,224	—	—	—	480	—
Cutting ... 28 ...	13	69· 0	—	1,700	300 900	500	—	1,700
Embankment ... 29 ...	14	18· 0	3,735	—	—	—	1,935	—
Cutting ... 29 ...	15	—	—	3,740	900 300	2,540	—	3,740
Embankment ... 30 ...	15	28· 0	695	—	—	—	215	—
Cutting ... 30 ...	15	50· 0	—	856	180 360	316	—	856
Embankment ... 31 ...	15	66· 0	2,133	—	—	—	1,473	—
Cutting ... 31 ...	16	13· 0	—	1,057	300 100	657	—	1,057
Embankment ... 32 ...	16	22· 0	721	—	—	—	609	—
Cutting ... 32 ...	16	23· 0	—	12	12	—	—	12
Embankment ... 33 ..	16	27· 0	120	—	—	—	—	—
Cutting ... 33 ...	16	32· 0	—	136	120 16	—	—	136
Embankment ... 34 ...	16	44· 0	369	—	—	—	138	—
Cutting ... 34 ...	16	56· 0	—	358	215 143	—	—	358
Embankment ... 35 ...	16	62· 0	143	—	—	—	—	—
Cutting ... 35 ...	17	47· 0	—	1,730	180	1,550	—	1,730
Embankment ... 36 ...	17	56· 0	1,345	—	—	—	625	—
Cutting ... 36 ...	17	70· 0	—	1,132	540 62	530	—	1,132
Embankment ... 37 ...	17	73· 0	62	—	—	—	—	—
Cutting ... 37 ...	17	77· 0	—	183	183	—	—	183
Embankment ... 38 ...	18	4· 0	836	—	—	—	253	—
Cutting ... 38 ...	18	25· 0	—	1,563	400 296	867	—	1,563
Embankment ... 39 ...	18	34· 0	296	—	—	—	—	—
Cutting ... 39 ...	18	50· 0	—	335	—	335	—	335
Embankment ... 40 ...	18	62· 0	597	—	—	—	397	—
Cutting ... 40 ...	19	34· 0	—	6,166	200 3,535	2,431	—	6,166
Embankment ... 41 ...	19	42· 0	3,535	—	—	—	—	—
Cutting ... 41 ...	19	41· 0	—	44	44	—	—	44
Embankment ... 42 ...	19	52· 0	1,011	—	—	—	337	—
Cutting ... 42 ...	19	67· 0	—	1,431	630	801	—	1,431
Embankment ... 43 ...	19	69· 0	41	—	—	—	—	—
Cutting ... 43 ...	20	3· 0	—	5,092	41 1,477	3,574	—	5,092
Embankment ... 44 ...	20	5· 0	1,477	—	—	—	—	—
Do. ... 44*a* ...	20	44· 0	9,192	—	—	—	9,192	—
Cutting ... 44 ...	20	46· 0	—	45	45	—	—	45
Embankment ... 45 ...	20	67· 0	672	—	—	—	267	—
Cutting ... 45 ...	21	6· 0	—	2,096	360 630	1,106	—	2,096
Embankment ... 46 ...	21	24· 0	2,948	—	—	—	2,184	—
Cutting ... 46 ...	21	29· 0	—	134	134	—	—	134
Embankment ... 47 ...	21	34· 0	102	—	—	—	—	—
Cutting ... 47 ...	21	39· 0	—	112	102 10	—	—	112
Embankment ... 48 ...	21	45· 0	225	—	—	—	—	—
Cutting ... 48 ...	21	59· 0	—	831	215 200	416	—	831
Embankment ... 49 ...	22	14· 0	16,213	—	—	—	16,013	—
Do. ... 49*a* ...	22	37· 0	12,224	—	—	—	10,784	—
Cutting ... 49 ...	22	70· 0	—	4,256	1,440 450	2,366	—	4,256
Embankment ... 50 ...	23	2· 0	2,600	—	—	—	1,610	—
Cutting ... 50 ...	23	39· 0	—	2,119	540 200	1,379	—	2,119
Embankment ... 51 ...	23	49· 0	1,481	—	—	—	1,081	—
Cutting ... 51 ...	23	74· 0	—	676	200 300	176	—	676
Embankment ... 52 ...	24	3· 0	1,309	—	—	—	870	—
Cutting ... 52 ...	24	7· 0	—	139	139	—	—	139
Embankment ... 53 ...	24	18· 0	2,373	—	—	—	2,013	—
Cutting ... 53 ...	24	37· 0	—	1,780	360 62	1,358	—	1,780
Embankment ... 54 ...	24	40· 0	62	—	—	—	—	—
Cutting ... 54 ...	24	45· 0	—	112	112	—	—	112
Embankment ... 55 ...	24	58· 0	979	—	—	—	800	—
Cutting ... 55 ...	24	60· 0	—	67	67	—	—	67
Embankment ... 56 ...	25	12· 0	6,526	—	—	—	6,166	—
Cutting ... 56 ...	25	44· 0	—	1,723	360	1,363	—	1,723
Embankment ... 57 ...	25	49· 0	115	—	—	—	82	—
Cutting ... 57 ...	25	51· 0	—	33	33	—	—	33
Embankment ... 58 ...	25	66· 0	707	—	—	—	662	—
Cutting ... 58 ...	25	71· 0	—	45	45	—	—	45

No. of Cutting or Embankment.	Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Embankment ... 59 ...	26	6· 0	601	—	—	—	512	—
Cutting ... 59 ...	26	11· 0	—	89	89	—	—	89
Embankment ... 60 ...	26	32· 0	693	—	—	—	419	—
Cutting ... 60 ...	26	39· 0	—	274	274	—	—	274
Embankment ... 61 ...	26	43· 0	41	—	—	—	—	—
Cutting ... 61 ...	27	16· 0	—	626	41	585	—	626
Embankment ... 62 ...	27	21· 0	97	—	—	—	—	—
Cutting ... 62 ...	27	39· 0		365	97 268	—	—	365
Embankment ... 63 ...	27	59· 0	753	—	—	—	345	—
Cutting ... 63 ...	28	13· 0	—	651	140 172	339	—	651
Embankment ... 64 ...	28	25· 0	172	—	—	—	—	—
Cutting ... 64 ...	28	52· 0	—	268	—	268	—	268
Embankment ... 65 ...	28	62· 0	176	—	—	—	126	—
Cutting ... 65 ...	28	71· 0	—	75	50 25	—	—	75
Embankment ... 66 ...	28	71· 0	62	—	—	—	—	—
Cutting ... 66 ...	28	77· 0	—	68	37 31	—	—	68
Embankment ... 67 ...	29	3· 0	82	—	—	—	—	—
Cutting ... 67 ...	29	15· 0	—	358	51 41	266	—	358
Embankment ... 68 ...	29	19· 0	41	—	—	—	—	—
Cutting ... 68 ...	29	20· 0	—	23	23	—	—	23
Embankment ... 69 ...	30	31· 0	2,288	—	—	—	* 2,165	—
Cutting ... 69 ...	30	68· 0	—	738	100	638	—	738
Embankment ... 70 ...	30	78· 0	82	—	—	—	—	—
Cutting ... 70 ...	31	1· 0	—	89	82 7	—	—	89
Embankment ... 71 ...	31	24· 0	200	—	—	—	163	—
Cutting ... 71 ...	31	32· 0	—	67	30 37	—	—	67
Embankment ... 72 ...	32	2· 0	736	—	—	—	699	—
Cutting ... 72 ...	32	50· 0	—	358	—	358	—	358
Embankment .. 73 ...	32	51· 0	50	—	—	—	—	—
Cutting .. 73 ...	32	61· 0	—	89	50 39	—	—	89
Embankment .. 74 ...	32	71· 0	143	—	—	—	66	—
Cutting ... 74 ...	32	72· 0	—	38	38	—	—	38
Embankment ... 75 ...	32	72· 0	22	—	—	—	—	—
Cutting ... 75 ...	33	6· 0	—	1,379	22 402	955	—	1,379
Embankment ... 76 ...	33	8· 0	402	—	—	—	—	—
Do ... 76*a* ...	33	28· 0	6,294	—	—	—	6,294	—
Cutting ... 76 ...	33	34· 0	—	134	134	—	—	134
Embankment ... 77 ...	34	—	7,830	—	—	—	7,696	—
Cutting ... 77 ...	34	3· 0	—	137	137	—	—	137
Embankment ... 78 ...	34	22· 0	2,758	—	—	—	2,438	—
Cutting ... 78 ...	34	25· 0	—	183	183	—	—	183
Embankment ... 79 ...	34	39· 0	1,577	—	—	—	1,377	—
Cutting ... 79 ...	34	52· 0	—	884	200 684	—	—	884
Embankment ... 80 ...	34	59· 0	971	—	—	—	287	—
Cutting ... 80 ...	34	62· 0	—	102	102	—	—	102
Embankment ... 81 ...	34	73· 0	1,518	—	—	—	876	—
Cutting ... 81 ...	35	8· 0	—	17,62	540 805	417	—	1,762
Embankment ... 82 ...	35	13· 0	805	—	—	—	—	—
Cutting ... 82 ...	35	17· 0	—	102	102	—	—	102
Embankment ... 83 ...	35	31· 0	1,168	—	—	—	566	—
Cutting ... 83 ...	35	48· 0	—	1,224	500 40	684	—	1,224
Embankment ... 84 ...	35	50· 0	85	—	—	—	—	—
Cutting ... 84 ...	35	52· 0	—	45	45	—	—	45
Embankment ... 85 ...	35	62· 0	2,177	—	—	—	1,877	—
Cutting ... 85 ...	36	7· 0	—	1 658	300 200	1,158	—	1,658
Embankment ... 86 ...	36	10· 0	435	—	—	—	—	—
Do. ... 86*a* ...	36	15· 0	331	—	—	—	—	—
Cutting ... 86 ...	36	36· 0	—	3,232	331 409	2,492	—	3,232
Embankment ... 87 ...	36	42· 0	409	—	—	—	—	—
Cutting ... 87 ...	36	45· 0	—	68	68	—	—	68
Embankment ... 88 ...	36	55· 0	306	—	—	—	—	—
Cutting ... 88 ...	36	61· 0	—	328	238 90	—	—	328
Embankment ... 89 ...	36	66 0	1,066	—	—	—	450	—
Cutting ... 89 ...	36	72· 0	—	526	526	—	—	526
Embankment ... 90 ...	36	76· 0	170	—	—	—	—	—
Cutting ... 90 ...	37	24· 0	—	662	170 200	292	—	662

* 235 cubic yards of station cutting.

No. of Cutting or Embankment.	Ending at		Contents of Embankment.	Contents of Cutting.	Volume to Embankment.	Volume to Spoil.	Bank from Side Cutting.	Earth.
	Miles.	chains.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.	C. yards.
Embankment ... 91 ...	37	34·0	339	—	—	—	—	—
Cutting ... 91 ...	37	49·0	—	907	139 200	568	—	907
Embankment ... 92 ...	37	65·0	3,523	—	—	—	1,973	—
Cutting ... 92 ...	37	74·0	—	2,996	1,350 352	1,294	—	2,996
Embankment ... 93 ...	37	78·0	352	—	—	—	—	—
Cutting ... 93 ...	38	4·0	—	829	829	—	—	829
Embankment ... 94 ...	38	12·0	1,113	—	—	—	—	—
Cutting ... 94 ...	38	22·0	—	521	284 237	—	—	521
Embankment ... 95 ...	38	38·0	1,923	—	—	—	1,386	—
Cutting ... 95 ...	38	48·0	—	383	300 62	21	—	383
Embankment ... 96 ...	38	51·0	62	—	—	—	—	—
Cutting ... 96 ...	38	62·0	—	375	—	375	—	375
Embankment ... 97 ...	38	66·0	82	—	—	—	—	—
Cutting ... 97 ...	38	74·0	—	446	82 45	319	—	446
Embankment ... 98 ...	39	1·0	274	—	—	—	—	—
Cutting ... 98 ...	39	5·0	—	293	229 64	—	—	293
Embankment ... 99 ...	39	7·0	64	—	—	—	—	—
Cutting ... 99 ...	39	12·0	—	360	200	160	—	360
Embankment ... 100 ...	39	16·0	291	—	—	—	—	—
Cutting ... 100 ...	39	23·0	—	565	91 100	374	—	565
Embankment ... 101 ...	39	42·0	2,628	—	—	—	1,628	—
Cutting ... 101 ...	39	49·0	—	2,277	900 1,377	—	—	2,277
Embankment ... 102 ...	39	55·0	3,408	—	—	—	523	—
Cutting ... 102 ...	39	61·0	—	1,731	1,508 223	—	—	1,731
Embankment ... 103 ...	39	70·0	623	—	—	—	—	—
Cutting ... 103 ...	39	73·0	—	2,272	400 400	1,472	—	2,272
Embankment ... 104 ...	40	5·0	400	—	—	—	—	—
Cutting ... 104 ...	40	10·0	—	96	96	—	—	96
Embankment ... 105 ...	40	22·0	4,161	—	—	—	2,265	—
Cutting ... 105 ...	40	34·24	—	2,450	1,800	650	—	2,450
Total ...	—		220,901	87,624	47,151	40,473	173,515	87,624

NOTE.—In contents of embankment, 235 cubic yards from station cutting is included.

ABSTRACT OF EARTHWORK.

Description.	Earth. C. yards.
Cube of cutting	87,624
Cube of side cutting	173,515
Additional earthwork at stations, including road approaches ...	15,250
Side ditches	16,000
Road diversions	5,000
Total	297,389

	Rs.	c.
Total quantities of excavation from all sources—297,389 cubic yards earth cutting, at 40c. per cubic yard	118,955	60

J.—Estimate of Rolling Stock required. (Metre Gauge.)

No.		Rate. Rs.	c.	Amount. Rs.	c.
5	Passenger locomotive engines	25,000	0	125,000	0
5	First class carriages	4,400	0	22,000	0
10	Second class carriages	4,000	0	40,000	0
34	Third class carriages	3,000	0	102,000	0
12	Passenger break vans	3,000	0	36,000	0
5	Goods locomotive engines	30,000	0	150,000	0
112	Covered goods wagons	1,400	0	156,800	0
28	Open goods wagons	1,200	0	33,600	0
9	Goods break vans	4,000	0	36,000	0
5	Horse boxes	2,800	0	14,000	0
4	Carriage trucks	1,100	0	4,400	0
1	Gunpowder van	1,600	0	1,600	0
1	Travelling crane	5,000	0	5,000	0
15	Ballast wagons	1,000	0	15,000	0
	Total ...			741,400	0

Works and Accommodation at Colombo Station required, if mixed Gauge be laid from Mahara to Colombo.

	Rs.	c.
Permanent way, third rail (72 lb. per lineal yard) from Mahara to Colombo, and in Colombo station yard, including points and crossings ...	112,000	0
Separate sidings for metre gauge rolling stock	12,000	0
Engine house and workshop	46,000	0
Additions to passenger platform and goods shed	28,000	0
Total ...	198,000	0

Works and Accommodation at Mahara if Gauge be broken at that Station.

	Rs.	c.
Passenger and goods platforms, roofed in	44,000	0
Workshops and machinery	96,000	0
Engine house	14,000	0
Turntable	10,000	0
Water tank, well, pump, &c.	5,000	0
Residences and cooly lines	55,500	0
Additional sidings with points and crossings	33,000	0
Additional earthwork	2,000	0
Total ...	259,500	0

K.—Statistics of Annual Exports and Imports of some of the towns and villages which would be served by the Chilaw Railway; also approximate quantities of Goods carried on the Canal in the Negombo District, on the road through Tóppuwa, and on two roads running out of Negombo, during 1886.

Name of Place.	Export Copperah. Tons.	Imports. Rice. Tons.	Imports. Miscellaneous. Tons.
Chilaw	1,650 ...	246 ...	—
Madampé	2,100 ...	1,392 ...	60
Máráwila	900 ...	70 ...	30
Dummaladeniya (Wennappuwa) ...	450 ...	174 ...	—
Bólawatta	1,500 ...	209 ...	—
Total ...	6,600	2,091	90

	Tons.
Passed Kochchikade southwards, in pada boats, in 1886 ...	23,578
Passed Negombo northwards, in pada boats, in 1886 ...	26,688
Passed through Toppuwa, in carts north and south, in 1886 ...	6,261
Passed along two roads running out of Negombo, in carts, in 1886 ...	2,852

No. 2.

Report by the Traffic Superintendent of the Railway.

(Enclosure of General Manager's Letter No. 685 of September 19, 1887.)

The projected railway for which I am requested to prepare estimates of traffic and expenses is to run through a district which is at present quite unknown to me; and as I have had no opportunity of becoming acquainted with its resources, general business, present means and rates of transport, &c., I am obliged to base my remarks upon the statements annexed hereto.

They are three in number, viz., one by the Engineer, one by the Assistant Government Agent, and one by the Government Agent.

I have partially adopted the views of the Assistant Government Agent as regards the passenger traffic, but as there is a difference of opinion between the Government Agent and his Assistant as to the possible goods traffic, I have chosen the report of the Engineer, that apparently being made up of figures taken on tonnage which actually passed certain fixed points.

Passenger Traffic.

The *proposed railway* begins at a point nine miles from Colombo (in connection with the Main line) and runs for 40½ miles through a country which is compared with that over which the Coast line is laid.

Along the line, and within five miles on its eastern side, there is said to be a population of 168,000.

The *Coast line* commences in Colombo and extends 27 miles southwards, serving a district reported to contain 165,000 inhabitants.

So far as the material for a passenger traffic goes, numbers are about equal, and the stations to be provided about the same. We are told that the residents along the proposed line are constantly moving about, and may be regarded as sure passengers; and although little business is expected on the first seven miles, a fair traffic from the remainder is anticipated.

On this assumption the comparison is made; but I must point out that the Coast line was constructed parallel to a road which had been for years the great and only artery for traffic from the south, not only to the Metropolis, but to Kandy and other important towns, and that, over and above the local business the speed and convenience of a railway is sure to create, there was a large and certain through traffic awaiting its completion—an element which, so far as I can ascertain, cannot be admitted into calculation for the Chilaw railway. The contiguity to Colombo of several of the Coast line stations is another source of success which cannot be looked for in the new line.

I am therefore obliged to regard the expected traffic as purely local (excepting, of course, the pilgrim travellers of which the Assistant Government Agent speaks); and while admitting that, as such, it will be very heavy, I must add, that as the migratory population is reported to be extremely poor, being chiefly composed of paddy field and cocoanut plantation labourers, who go about from place to place in search of employment, it will be nearly all third class and for short distances. The fares too must be very low, and I recommend 6c., 3c., and 2c. per mile for 1st, 2nd, and 3rd classes respectively be adopted, the rates now obtaining on the Coast line.

There may be a fair business between Colombo and Negombo, but there can never be any approach to the income from season-tickets (Rs. 13,000 in 1886) now received from the Coast line; and the established coach and steamboat service may for a long period oppose us.

After seven years' operation, the Coast line, with all the advantages I have briefly summed up, and including bookings to the Main line, earned in 1886 Rs. 227,000 for passengers and Rs 11,000 for parcels.

In considering these figures, it must be borne in mind that, as regards Main line bookings, the receipts of the Fort, Pettah, and Maradána Junction stations (practically Colombo) are included: and this must be specially observed in the matter of parcels.

I am therefore of the opinion that not more than one-third of the passenger receipts can be fairly expected of the new line, and that one-fifth will adequately represent the parcels earnings. Rs. 3,000 for mails may be placed to its credit, as the sums now paid by Government for that service will be almost entirely saved.

My estimate of the coaching receipts is therefore—

	Rs.	c.
Passengers	75,700	0
Parcels	2,000	0
Mails	3,000	0
	80,700	0

GOODS TRAFFIC.

As far as I can judge from the data before me, the Chilaw and Negombo districts are, agriculturally, chiefly composed of paddy fields and cocoanut plantations, and in this respect are similar to the Kalutara district, except that paddy fields predominate. Native paddy forms no portion of railway freight, and cannot be considered in this estimate, and the only other local produce appears to be copperah and vegetables.

The Assistant Government Agent states that "from stations north of Tóppuwa 50,000 tons of copperah are probably exported annually to Colombo," but in his Administration Report for 1885 (page 30A) he gives the quantity as 119,598 cwt., or 5,979 tons.

The Engineer reports (without defining the traffic, and therefore I assume embracing the whole) that only "6,261 tons passed Tóppuwa bridge in carts," and that "23,578 tons passed Kochchikade southward in boats," a total of 30,000 tons, including no doubt salt from Puttalam.

In 1885 the total exports of copperah and cocoanut oil from both Colombo and Galle were:—

Oil ... ... 13,750 tons | Copperah ... ... 8,918 tons

4,200 lb. copperah make one ton oil: therefore, 26,000 tons copperah would provide all the oil exported from the above-mentioned ports in one year. Add 9,000 tons of copperah exported, and we still have 15,000 tons left out of the 50,000 tons said by the Assistant Government Agent to be produced annually in the vicinity of the proposed railway.

As there is a very extensive copperah-producing area in the Western and Southern Provinces, whose only outlet for export must be Colombo or Galle, I am obliged to conclude that the Assistant Government Agent has greatly over-estimated the quantity of copperah manufactured in the North-Western Province. I therefore take only one-third of the quantity he mentions.

Salt forms a large traffic between Puttalam and Colombo, but as it is produced in a town some 25 miles beyond the terminus of the railway, and there already exists a system of cheap transport, we have to consider the probability of our being able to tap the traffic at Chilaw.

The Government Agent is of the opinion that we cannot, but his Assistant places the quantity at 9,000 tons.

There are two conditions indispensable to our obtaining the business:—

(1) The salt must be delivered in Colombo as cheaply as now.
(2) Return traffic must be found for the boats plying between Puttalam and Chilaw.

Salt costs at Puttalam Rs. 2·36 per cwt., and is sold to the shopkeeper at Grandpass for (average) Rs. 2·80, so that the transport charges are about Rs. 8·80 per ton.

The railway charge on salt from Chilaw at third class rates on the Coast line scale of 8⅓c. per ton per mile would be Rs. 4·17 per ton, leaving Rs. 4·63 for water carriage, transfer, cartage, &c.

Assuming the boatmen charge half as much to convey salt to Chilaw for transfer to the railway as they now do to bring it to Colombo, we find:—

	Rs.	c.
Cost of salt per cwt. in Puttalam	2	36
Canal to Chilaw	0	22
Transfer from boat to rail, say 75c. per ton	0	03·8
Rail charge at Rs. 4·17 per ton	0	20·9
Cartage in Colombo, 75c. per ton	0	03·8
Total cost by rail ...	2	86½
Present cost by canal ...	2	80
Showing an increase per cwt. of ...	0	6½

which coupled with the objections to transfer, native indifference for time, and the probability that in the face of opposition the boatmen would decrease their charges to Colombo, and increase them between Puttalam and Chilaw, appear to me to present a formidable barrier to our acquisition of the traffic.

Copperah and salt are the exports of the Province; the principal import is rice.

The Assistant Government Agent computes the quantity at 500,000 bushels, equal to 14,000 tons, the major part of which probably forms return loads for the boats engaged in bringing down salt.

Rice is sold in Colombo at an average of Rs. 2·87 per bushel. It realises Rs. 3·25 in the Piṭigal kóralé and Rs. 3·50 in Puttalam, so that the cost of carriage and the profits of the vendors may be set down at about Rs. 13·30 and Rs. 22·05 per ton, respectively.

The railway charge on rice to Chilaw at the second class rate now obtaining on the Coast line, viz., 12½c. per ton per mile, would be Rs. 6·25 per ton; and it appears to me that we should be able to place rice in the Puttalam shops for Rs. 3·29 per bushel, and that after allowing 6c. per bushel profit to the shopkeeper, the purchaser should get his supplies at 20c. per bushel less than by canal, *e.g.* :—

	Rs.	c.
Rice costs in Colombo	2	87
Cartage to railway, at 50c. per ton	0	1·4
Railway freight to Chilaw, 50 miles at 12½c. per ton per mile ...	0	18
Transfer from rail to boat, at 75c per ton	0	2·2
Boat line to Puttalam, say two-thirds of rail charge	0	12
Cartage and wharfage at Puttalam	0	2
Total transport	3	22½
Add vendor's profit ...	0	6
	3	28½
Saving to customer ...	0	21½
	3	50

The Piṭigal kóralés are, I understand, within five miles of the proposed railway, and the following figures should apply :—

	Rs.	c.
Cost of rice in Colombo	2	87
Cartage to station, at 50c. per ton	0	1·4
Rail freight to Chilaw	0	18
Cartage from Chilaw, at Rs. 1·50 per ton	0	4
Total transport ...	3	10·4
Add vendor's profit ...	0	6
	3	16½
Saving to customer ...	0	8½
	3	25

It appears to me that salt down and rice up must always be a connected traffic on this route, and that whatever system of transport successfully bids for one, must, as a matter of course, secure the other; and I argue, that if we can place rice in the hands of the consumer at a rate so much below that now obtaining, we shall certainly command the traffic, as the boatmen could not bring down salt at the present rate without rice to take back.

Opposition from the boatmen is to be expected, and it may either be that they will reduce their charge for the conveyance of rice so low as to prevent the railway offering any advantage in that respect, or they will charge very heavily for the transport between Chilaw and Puttalam. It is the latter I fear, and I am afraid that when we have deposited the rice in Chilaw they will only take it forward at exorbitant rates.

The Assistant Government Agent will be able to give the best information on this point and also as to the probable cost of transfer at Chilaw; and assuming he would be able to obtain reasonable water-carriage rates, we may fairly conclude that a large proportion of the rice and salt traffic would be thrown upon the railway.

As regards the supply of sleepers, I am informed that the lowest price fixed by Government for their disposal is above that for which they can be purchased out of the Island and landed free on the wharf.

The principal traffic to be expected consists of copperah, rice, and salt. The Assistant Government Agent's estimate of the tonnage under the heads of fish, vegetables, &c., is too moderate to be seriously disputed.

The income of a railway to Chilaw would probably be as follows :—

Rates.

1st class goods, 16⅔c. per ton per mile
2nd do. 12½c. do.
3rd do. 8⅓c. do.

Rice is 2nd class, copperah and salt 3rd class.

Estimate.

			Rs.	c.	Rs.	c.
Copperah	16,000 tons, at average		3	50	56,000	0
Rice	9,000	do.	5	0	45,000	0
Salt	3,000	do.	4	17	12,510	0
Miscellaneous	1,000	do.	5	0	5,000	0
Total for goods ...					118,510	0
Add coaching receipts ...					80,700	0
Total revenue ...					199,210	0

The working expenses of a new line would necessarily be greater at the outset, and Rs. 2·81 per train mile should be considered a fair basis, as the number of train miles are comparatively few on a new railway, while the traffic staff to be employed would be as large for a more frequent service, and, except for actual wear and tear, expenses very much the same.

To run two trains each way per week day, and one train each way on Sundays, would be—

			Miles.
Four trains × 41 miles × 310 week days	=	... ...	50,840 0
Two trains × 41 miles × 55 Sundays	=	... ...	4,510 0
		Total mileage ...	55,350 0

55,350, miles, at Rs. 2·81 = Rs. 155,533.

		Rs.	c.
Revenue	...	199,210	0
Expenditure	...	155,533	0
Profit	...	43,677	0

A. G. PERMAN,
Traffic Superintendent.

Colombo, August 16, 1887.

Enclosure No. 1 in No. 2.

The GOVERNMENT AGENT, Kurunégala, to the GENERAL MANAGER, Ceylon Government Railways.

No. 971/7,123. Kurunégala Kachchéri, June 22, 1887.

SIR,—IN reply to your letter No. 482 of the 19th ultimo, I have the honour to annex copy of a report by my Assistant at Puttalam on the estimated traffic to be carried by the railway to Chilaw, and to offer the the following remarks thereon :—

I.—PASSENGER TRAFFIC.

2. This will no doubt be very large. Between Já-ela and Mádampé the district to be served is narrow, has a teeming population, and the people travel a great deal. I therefore see no reason to question the correctness of Mr. Lushington's anticipations in this respect.

II.—GOODS TRAFFIC.

3. This I believe to be greatly over-estimated. Mr. Lushington has ignored three very important facts : (1) that two roads and a canal run parallel with the proposed line, (2) that native producers and traders have a great dislike to frequent loadings and unloadings of their goods and produce, and (3) that between Chilaw and Puttalam all salt, rice, and copperah must be carried by water. No railway can compete successfully with water-carriage, except as regards speed ; and the natives of Ceylon have not yet learned that quick despatch of produce, which does not spoil in transit, is of any importance.

To compete with cart-carriage by road, the railway rates must be very low, and the points at which traffic can be caught must be equally numerous. It is within my own knowledge that to the beginning of last year rice was being carried from Náwalapitiya to Tillicoultry bazaar by cart, mainly because of the frequent loadings and unloadings which the employment of the railway for transporting rice would have necessitated. If this was the case with cart rates as high as they were likely to be on a mountain road, where carts and cattle are scarce, how much more keen will be the competition in a dead level country abounding in cheap cattle and carts ? Personally I am convinced that so long as the canal is open the boatmen will use it in preference to unloading their salt at Chilaw, sending it by rail to Colombo, and taking the chance of getting a return load of rice from Chilaw to Puttalam. It may also be mentioned that boatmen carry rice from Colombo to Puttalam, not only for the sake of filling their boats, but in order to avoid having to carry money wherewith to pay for their salt in Puttalam. If they discharged their load of salt at Chilaw they would still have to deliver it personally in Colombo, buy a load of rice there, carry it by rail to Chilaw, and ship it there for Puttalam, having lost nearly as much time over this as if their boat had gone right on to Colombo, and having had to pay their men for eight or ten idle days. If the canal were closed, the boats would not ply between Puttalam and Chilaw at all, as their owners would certainly not lock them up between these two places.

The traffic from salt, therefore, I should altogether eliminate from Mr. Lushington's returns.

I have, &c.,
P. A. TEMPLER,
Government Agent.

Sub-Enclosure in Enclosure No. 1 in No. 2.

The ASSISTANT GOVERNMENT AGENT, Puttalam, to the GOVERNMENT AGENT, Kurunégala.

No. 647/96. Puttalam Kachchéri, June 13 (15), 1887.

SIR,—IN reply to your letter No. $\frac{A.38}{7123}$, of May 21 last, I have the honour to annex an estimate of the probable traffic on the proposed Chilaw Railway.

I.—PASSENGER TRAFFIC.

This will to a great extent depend upon the number of stations and the distance apart at which they are fixed. The passenger traffic may be classed under two groups.

(1) *Terminal—i.e.*, the traffic of passengers going to and from Colombo from the various stations. This is not likely to be so great as that on the Seaside line, because there are fewer stations and fewer residences within the first seven miles. But if facilities are afforded in the way of stations and convenient trains, I think it likely that this may increase. On the other hand, the traffic from the longer distances—Já-ela, Negombo, Kochchikade, Nainamadama, and Maráwila—is, I think, likely to be greater than that on the Kalutara line beyond Mount Lavinia.

As I have shown in my latter No. $\frac{254}{20}$ of March 13, 1885, the population of the Negombo district (the northern limit of which will be only 23 miles by rail from Colombo) is 116,691 against 165,021 in the Kalutara district, which extends southwards 33½ miles, while the Pitigal kóralés north and south, the *whole of which are within 5 miles of the trace*, contain a population of 52,060; the Chilaw terminus being only about the same dist ance from Colombo that Bentota is on the south.

As regards population, therefore, excluding the immediate surroundings of Colombo, the balance is slightly in favour of Chilaw.

To this must be added the very large traffic which may be counted upon at the season of St. Anna's Festival at Tallavilla. The numbers at this festival amount on an average to upwards of 25,000, of whom probably 15,000 come viâ Colombo, and the increased facilities of a railway would attract more to this route. I think it probable that during the three weeks at least 5,000 would travel by rail from Colombo to Chilaw and back, and 1,000 from Negombo to Chilaw and back.

(2) *Local or intermediate Traffic.*—This will mainly depend upon the nearness of the stations and convenience of the trains. Negombo would become a great centre for such traffic, and I anticipate that large numbers would be conveyed daily between Negombo, Kochchikade, Nainamadama, and Katuneriya.

It must be remembered that the greater proportion of the population of these parts is Roman Catholic, that the district is teeming with Roman Catholic churches; but that the services in a group of churches are carried on by one priest only. The congregations therefore follow the priest, and during the festivals large numbers would go from Nainamadama to Katuneriya, or Katuneriya to Nainamadama, according as the priest is for the time being stationed at one or the other.

II.—Goods Traffic.

(*a*) *Rice.*—The whole of the town population of Puttalam lives on Coast rice, the whole population of Kalpitiya and Akkarai pattus, and five-sixths of the population of the Pitigal kóralés.

I calculate therefore that 500,000 bushels of Coast rice have to be imported into the Puttalam district annually to feed the population, and I presume an equal amount would be required for the Negombo district.

(*b*) *Copperah.*—From the various stations north of Toppu 50,000 tons of copperah are probably exported per annum to Colombo, and the amount is likely to go on steadily increasing for each year. There has been a regular increase of cocoanut cultivation: over 3,000 acres have been brought into cultivation in 1886, and a similar extent in 1885. The crop on these extensions ought in eight years to add 3,000 tons to the amount of copperah. The rate for this produce as well as for cocoanut should be made as low as possible (third class rates) so as to avoid cart competition.

(*c*) *Salt.*—The figure for this can be given pretty accurately. The Government sells at Puttalam on the average 240,000 cwt.—12,000 tons—per annume, of which three-fourths go to Colombo, and would be loaded at Chilaw. The amount may therefor be taken at 9,000 tons.

(*d*) Other *food stuffs, cloths, &c.*, should add 1,000 tons to the traffic.

(*e*) *Timber*, if worked satisfactorily, ought to add largely to the traffic tonnage: and there is no reason why the supply of sleepers for the whole railway should not be obtained from this district. It is preposterous that the enormous supply of Norwegian sleepers should be imported annually, when we have such a supply of satinwood, milla, &c., left to rot in our forests.

(*f*) *Fish*, fresh and dried, would probably add 300 tons.

(*g*) *Vegetables*, 200 tons.

Summary.

	Tons.
Rice (calculating 2 bushels per cwt.)	12,500
Copperah and cocoanuts	50,000
Salt	9,000
Food stuffs, cloth, &c.	1,000
Timber	500
Fish	300
Vegetables, plantain, pumpkins, manioca, &c	200
Total ...	74,000

I would recommend that cocoanut and copperah be carried either at third class rates or at a special rate between second and third class, so as not to exceed Rs. 3·25 per ton from Chilaw, Rs. 3 from Máráwila. At these rates there need be no fear of competition.

I am, &c.,

C. M. LUSHINGTON,
Acting Assistant Government Agent.

Enclosure No. 2 in No. 2.

The Assistant Government Agent, Puttalam, to the Government Agent, Kurunégala.

Puttalam Kachchéri, September 9 (12), 1887.

Sir,—Referring to the Traffic Superintendent's letter No. 926 of 29th ultimo, forwarded with your memorandum No. 896/7,123 of August 31, I have the honour to inform you that in my opinion the estimate of 50,000 tons of copperah is not excessive.

2. The figures to which the Traffic Superintendent refers in my administration report were some given by the Mudaliyár as an estimate of copperah transported to Colombo from estates within five miles of the high road. In writing my report I clearly stated that in my opinion those figures were "far below the mark."

3. Since my report was written the trace has been surveyed, and runs at some distance to the east of the high road, bringing a larger extent of cocoanut land within the range; and moreover, at least 3,000 acres of land, which were then planted with cocoanuts, have come into full bearing; and even supposing that the work were taken in hand at once, the three or four years which must elapse before the completion of the work would bring another 5,000 acres into full bearing. After that each succeeding year will increase the out-turn, and as the area cultivated increases at a more rapid rate than the population, the amount of copperah available for export (after allowing for the wants of the population) is increased in a still larger proportion.

4. The Blue Book returns for 1886 (excluding the Demala hatpattu) show 60,250 acres of land under crop of cocoanuts. A low average rate of crop gives 2,700 nuts per acre, while in the Piṭigal kóralé south the crop often exceeds 3,500. Taking the lower figure, we get 162,775,000 nuts, the copperah of which at a quarter ton per 1,000 nuts gives 40,698 tons; and if the higher figure be adopted for the Piṭigal kóralé south only, 15,000,000 nuts should be added, giving an increase of 3,750 tons, or 44,445 tons in all. Besides the amount of copperah actually grown in this district, there is a considerable export of copperah from the Seven Kóralés, which is loaded at Chilaw, Mádampé, Nátandiya, and Tóppu, and I have been astounded lately at seeing the large amounts conveyed by canal from these places.

5. Allowing, therefore, or the lapse of time which must ensure before completion of the work, I do not think 50,000 tons is too high.

6. If an estimate of probable immediate returns is required, the figure might be set at 32,000 tons, which makes allowance for the local consumption of cocoanuts.

I am, &c.,

C. M. LUSHINGTON,
Acting Assistant Government Agent.

VIII.—1887.

IRRIGATION RETURNS.

RETURN to an Order of the LEGISLATIVE COUNCIL dated December 30, 1886:

FOR a Return of (1) Irrigation Districts in each division of each Province; (2) Number of Tanks in each division, and the probable Area irrigated in such division; (3) Name and locality of each Tank which irrigates, or is capable of irrigating, 640 acres or more, and the cost of its original repair (where repair has taken place) and of its annual maintenance; (4) Amount of Tithes, Water-rates, or any other Charges due and collected in each division annually since 1870."

(The Hon. P. Rama-Náthan.)

Ordered by the Legislative Council to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

RETURN of (1) Irrigation Districts in each Division of each Province; (2) Number of Tanks in each Division, and the probable Area irrigated in such Division; (3) Name and locality of each Tank which irrigates, or is capable of irrigating, 640 acres or more, and the cost of its original repair (where repair has taken place) and of its annual maintenance; (4) Amount of Tithes, Water-rates, or any other Charges due and collected in each Division since 1870.

Province and Division.	Irrigation District of Division.	Number of Tanks.	Number of Elas.	Remarks.	Cost of Repairs.	Cost of Maintenance.	Probable Area irrigated.	Average Amount of Tithe collected, 1870–86.	Total Amount of Water-rate collected.
					Rs. c.	Rs c.	A. R. P.	Rs. c.	Rs. c.
WESTERN.									
Colombo ...	Salpiti korale	2	—	Includes no tank or ela irrigating more than 640 acres	—	—	338 0 0	693 93*a*	3,468 47*b*
Kalutara ...	Rayigam korale	5	—	do. do. ...	—	—	664 2 0	2,725 60*c*	—
Do.	Kalutara Totamuna	—	3	do. do. ...	—	—	686 3 0	935 95*d*	—
Do.	Panadure Totamuna	—	1	do. do. ...	—	—	385 0 0	830 0*c*	—
Sabaragamuwa ...	Kolonna korale	—	1	do. do. ...	—	—	271 3 18	143 58	3,548 21*e*
Do.	Atakalan korale	—	1	do. do. ...	—	—	117 2 35	153 7	2,587 11*f*
NORTH-WESTERN.									
KURUNEGALA.									
Wanni hatpattu ...	Pahalawisideke korale ...	2	—	Includes Mediyawa tank, irrigating 535 acres 20 perches	21,415 0	—	649 0 20	442 61	1,662 63
Do. ...	Gantihe korale	1	—	—	1,069 52	—	76 0 0	60 91	—
Do. ...	Magul Medagandahe east ...	3	—	—	3,255 62	49 66	231 0 0	208 52	—
Do. ...	Magul Medagandahe west ...	2	—	—	2,174 51	25 89	167 0 0	94 5	—
Do. ...	Hatalispahe east	3	—	—	4,152 42	34 0	217 0 0	186 75	—
Do. ...	Hatalispahe west	6	—	Includes Galgomuwa tank, irrigating 500 acres ...	22,078 23	4,124 44	984 0 0	715 33	2,396 92
Do. ...	Mioyen Egoda korale	4	—	—	6,878 73	—	334 0 0	254 22	—
Do. ...	Magul Otota korale	4	—	Includes Magallewewa, irrigating 2,000 acres ...	5,000 66	7,909 67	2,411 0 0	601 25	3,280 50
Do. ...	Katuwanna korale	1	—	—	1,116 79	—	72 0 0	62 35	—
Weudawili hatpattu ...	Hewawisse korale	1	—	Includes Kudugalapitiya anicut, irrigating 390 acres; Wenoruwewa, irrigating 419 acres 3 roods and 12 perches; and Wewagedara, irrigating 120 acres, for which water rate is not collected	38,813 9½	6,465 43	929 3 12	872 17	9,303 56
Do. ...	Tirigandahe korale	1	—						2,049 60
Do. ...	Gandahe korale	1	—	—					—
Hiriyala hatpattu ...	Divigandahe korale	1	—	—	2,609 76	—	121 0 0	136 70	—
Dewamedi hatpattu ...	Tissawa korale	1	—	—	1,079 0	—	111 0 0	74 29	—
PUTTALAM.									
Pitigal korale south ...	Yagam pattu, Yatakalam pattu, and Meda palata	8	6	Includes Tenapitiyawewa fed by Kadupiti-oya, which irrigates 1,100 acres	35,000 0	—	4,803 0 0	5,411 22	8,622 35
Do. ...	Otara palata and Kaimal pattus ...	2	2	Includes no ela or tank irrigating more than 640 acres	—	—	800 0 0		
Pitigal korale north ...	Anevulundan and Munnesseram pattus south of Deduru-oya ...	5	—	Includes no tank irrigating more than 640 acres ...	—	—	1,203 0 0	4,686 0	—
Do. ...	Anevulundan and Munnesseram pattus north of Deduru-oya ...	10	1	This includes tanks which were intended to be fed by Deduru-oya sluice and channel ...	21,280 0	—	1,450 0 0		
Puttalam ...	Puttalam	3	—	Includes no tanks irrigating more than 640 acres ...	—	—	284 0 0	533 89	—

a Annual grain commutation collected. Commutation commenced in this district in 1880.
b Amount collected in ten annual instalments.
c Amount of commutation collected annually since the commencement of the present term of commutation in 1882.
d Amount of commutation collected annually since the commencement of the present term of commutation in 1881
e Water-rate recovered from 1873 to 1886.
f Water-rate paid up to 1906.

Province and Division.	Irrigation District of Division.	Number of Tanks.	Number of Elas.	Remarks.	Cost of Repairs.	Cost of Maintenance.	Probable Area irrigated.	Average Amount of Tithe collected, 1870-86.	Total Amount of Water-rate collected.
					Rs. c.	Rs. c.	A. R. P.	Rs. c.	Rs. c.
Kalpitiya ...	Kalpitiya	2	3	Includes Vavulaikulam, which would irrigate 560 acres if restored	—	—	760 0 0	655 0	—
Demala hatpattu ...	North	9	—	This includes Maha Tabboa, which, if restored, would irrigate over 640 acres	—	—	1,449 0 0		
Do. ...	Central	4	—	This includes Uruyawa, which, if restored, would irrigate more than 640 acres ;	—	—	—		
				Galkulam, which has not 640 acres benefited, but has been restored ; and	428 52	—	2,019 0 0	2,527 0	347 40
				Maha Uswewa restored, and is supposed to irrigate 1,200 acres	37,527 96	—	—		
Do. ...	South	2	1	Includes no tank or ela irrigating 640 acres ...	—	—	240 0 0		
SOUTHERN.									
Galle	—	—	—	In Galle District there are no elas or other irrigation works, except Degoda tank. The Irrigation Ordinance has only been introduced into small portions of the Galle District, viz., Kodagoda, Akmimana, Mapalagama, and Baddegama sub-divisions. The only tank restored under the provisions of the Irrigation Ordinance is Degoda				—a	
Do. ...	Kotagoda	—	—	Degoda	6,016 0	125 0	100 0 0b	—	3,963 0
Matara	—	22	—	The whole district is under the Irrigation Ordinance. An extent of 620 acres is irrigated by small tanks : for five of these masonry was provided by Government at cost shown Over 7,370 acres irrigated by the large works, viz. :	3,243 0	—	8,000 0 0	—	—
Do. ...	Gangaboda pattu	—	—	(1) Hali-ela and Ellawala tanks and connected distributing works at Sapugoda, Urapolla, Petre, and Aluwatugoda	312,185 0	3,336 0	4,680 0 0	—	41,151 80
				These works form one connected series known as the "Gangaboda scheme" for the benefit of lands dependent on the Kireme-aar. Water-rate due in perpetuity at Re. 1 per acre.					
Do. ...	Wellaboda pattu	—	—	(2) Kekandura and Dandeniya tanks and connected distributing works	118,957 0	2,029 0	1,854 0 0	—	11,897 26
				Water-rate in perpetuity.					
Do. ...	Kandaboda pattu	—	—	(3) Denegama and Wewangewewa	122,678 0	973 0	767 0 0	—	7,452 50
				This cost includes about Rs. 45,000 spent on the old bund, which was twice breached and eventually abandoned.					
Do. ...	Weligam korale	—	—	(4) Borala } Village tanks ...	1,469 0	25 0	423 0 0	—	1,350 0
Do. ...	Wellaboda pattu	—	—	(5) Wehella } Village tanks ...	1,423 0	67 0	63 0 0	—	739 0
				Earthwork done by the people. Original estimated cost of masonry repaid in ten yearly instalments.					
Hambantota ...	Giruwa pattu	700	—	Giruwa pattu.					
				Includes every village tank in the pattu, and the probable area watered, as reported by the headmen, is	—	—	10000 0 0	—	—
Do. ...	Do.	—	—	Kirema tank	92,394 0	5,075 0	5,000 0 0	—	—

						This includes original outlay on restoration by Sir Henry Ward in 1858, and the cost of additions in 1885, when level of water was raised 3 ft., but is exclusive of repairs in 1867. No water-rate levied						
Do.	...	Do.	...	...	—	—	Etpitiya anicut	7,120 0	—	—	—	—
Do.	...	Do.	...	...	—	—	Arachchiamuna	1,990 0	—	—	—	—
							Distributing works on Kireme-aar executed in 1886. No water-rate yet collected. Proprietors have undertaken to pay.					
Do.	...	Do.	...	...	—	—	Urubokka dam	86,000 0	5,075 0	4,000 0 0	—	—
							This is the original cost when restored in 1858 by Sir H. Ward. The dam turns the superfluous water of Matara river into the Urubokka-aar, which flows down to the Giruwa pattu and fills					
Do	...	Do.	...	...	—	—	Udukiriwala tank and works	92,727 0	1,190 0	3,164 0 0	—	20,098 0
							Water-rate in perpetuity. The tank is filled from the Urubokka stream.					
Do.	...	Magam pattu	...	...	70	—	Magam pattu	—	—	2,500 0 0	—	—
							Exclusive of abandoned tanks and lands not now cultivated.					
Do.	...	Do.	...	...	—	—	Tissamaharama	198,640 6	2,380 0	1,000 0 0	—	—
							No water-rate levied.					
CENTRAL												
KANDY. *c*												
Tumpane		Udapalata	...	...	—	1	Includes no ela or tank irrigating more than 640 acres	—	—	121 3 16	277 98	—
Lower Dumbara		Udagampaha	...	...	—	1	do. do. ...	—	—	392 2 0	376 94	—
Do.		Palispattu east	...	...	—	2	do. do. ...	—	—	185 0 0	339 82	—
Do.		Palispattu west	...	...	—	1	do. do. ...	—	—	146 3 0	368 47	—
Uda Dumbara		Udasiyapattu	...	...	—	2	do. do. ...	—	—	166 3 16	376 57	—
Do.		Medasiyapattu	...	...	2	—	do. do. ...	—	—	350 0 0	1431 0	—
Do.		Kandapahala	...	...	—	2	do. do. ...	—	—	704 0 0	327 0	—
Udapalata		Gangapahala	...	...	—	1	do. do. ...	—	—	150 0 0	240 90	—
Do.		Kandukarapahala	...	...	—	3	do. do. ...	—	—	306 0 0	226 1	—
Do.		Kandukaraihala	...	...	1	—	do. do. ...	—	—	200 0 0	491 20	—
Do.		Gangaihala	...	...	—	1	Includes Gampolawela Raja-ela, irrigating 700 acres	—	—	700 0 0	469 23	—
MÁTALÉ.												
Mátalé north	...	Udugoda Pallesiya pattu		...	1	—	Includes no ela or tank irrigating more than 640 acres	—	—	45 0 0	1,359 87	—
Do.	...	Udugoda Udasiyapattu		...	1	—	do. do. ...	—	—	150 0 0	1,578 98	—
Do.	...	Wagapanaha Udasiyapattu		...	1	—	do. do. ...	—	—	60 0 0	1,451 39	—
Mátalé south	...	Mátalé Udasiyapattu		...	—	1	do. do. ...	—	—	36 0 0	1,489 18	—
Do.	...	Mátalé Medasiyapattu *e*		...	—	1	do. do. ...	—	—	62 0 0	—	—
Do.	...	Kohonsiyapattu ...		...	—	1	do. do. ...	—	—	45 0 0	2,151 57	—
Do.	...	Gampahasiyapattu ...		...	—	6	do. do. ...	—	—	290 0 0	2,338 66	—
Mátalé east	...	Mátalé Pallesiyapattu...		...	—	5	do. do. ...	—	—	221 3 0	3,452 99	—
Do.	...	Laggala Pallesiyapattu		...	9	2	Includes (*a*) and (*b*), irrigating 700 acres ...	—	—	—	1,250 72	—
							(*a*) Minipe-ela *alias* Kammal-ela amuna. (*b*) Dasgiriamuna.					
Do.	...	Gangala Pallesiyapattu		...	—	3	Includes no ela or tank which irrigates over 640 acres	—	—	205 2 2	912 6	—

a Tithe collected from irrigated land cannot be separated from tithe collected from unirrigated land.

b Partially.
c Small native elas irrigating less than 60 acres are excluded.

d Commutation of 1878.
e Korale created in 1879.

Province and Division.	Irrigation District of Division.	Number of Tanks.	Number of Elas.	Remarks.	Cost of Repairs.	Cost of Maintenance.	Probable Area irrigated.	Average Amount of Tithe collected. 1870–86.	Total Amount of Water-rate collected.
NUWARA ELIYA.					Rs. c.	Rs. c.	A. R. P.	Rs. c.	Rs. c.
Kotmale ...	Udapane	—	2	Includes no ela or tank irrigating more than 640 acres	—	—	320 0 0	4,649 0	—
Do. ...	Pallepane	—	3	do. do. ...	—	—	354 0 0	2,180 0	—
Uda Hewaheta ...	Udagampaha	—	1	do. do. ...	—	—	100 0 0	3,651 0	—
Do. ...	Pallegampaha	—	5	do. do. .	—	—	1,234 0 0	2,321 0*a*	—
Do. ..	Kohoka	—	2	do. do ...	—	—	570 0 0	2,851 0	—
Do. ...	Gammane .. .	—	4	do. do. ...	—	—	614 0 0	2,418 0	—
Do. ...	Diyatilaka	—	1	do do. ...	—	—	100 0 0	1,657 0	—
Do. ...	Gangapalata	—	1	do. do.	—	—	240 0 0	1,222 0	—
Walapane ..	Udapalata	—	3	do. do. ...	—	—	250 0 0	3,235 0	—
Do. ...	Yatipalata	—	2	do. do. ..	—	—	340 0 0	2,307 0*b*	—
Do. ...	Medapalata	—	—	do. do. ...	—	—	—	2,896 0	—
Do. ...	Oyapalata ...	—	2	do do. ...	—	—	270 0 0	3,619 0	—
PROVINCE OF UVA.									
Badulla ...	Udakinda	29	562	Includes Uma-ela, irrigating 800 acres ...	4,150 0	120 86	15,222 0 0	29,685 23	—
Do. ...	Yatikinda	—	706	—	—	—	11,092 0 0	19,883 84	5,754 31
Do. ...	Wellawaya	44	150	—	—	—	4,895 0 0	2,291 57	—
Do. ...	Viyaluwa	—	31	—	—	—	9,820 0 0	8,999 72	150 1
Do. ...	Wellassa	15	39	—	—	—	2,730 0 0	6,853 27	—
Do. ...	Bintenna	6	—	Includes Horaborawewa, irrrigating 3,000 acres ...	11,179 93	227 26	1,027 0 0	1,542 54	2,612 14
Do. ...	Buttala	2	68	Includes Buttala-ela, irrigating 800 acres ...	16,811 55	139 99	3,984 0 0	3,844 11	10,085 8
EASTERN. *c*									
Batticaloa ...	Rukam	22	—	Rukam tank	103,104 42	1,025 68*d*	6,000 0 0	6,632 88	49,250 50
Do. ...	Manmunai	11	1	Pulukunavi tank	56,212 12	869 37	3,200 0 0	141791 40	9,198 27
Do. ...	Manmunai	—	1	Kadukkamunai tank	26,778 92	—	—	—	—*e*
Do. ...	Porativu	27	—	Divulanai tank	43,924 48	700 54	1,165 0 0	4,575 28	3,672 79
Do. ...	Sammanturai	10	—	Sadayantalawa	55,926 90	609 73	1,375 0 0	882 35	5,545 78
Do. ...	Nadukadu	12	—*f*	Amparai and Irakkamam tanks	176,732 89	2,848 84	22,000 0 0	28,335 23	77,326 38
Do. ...	Akkarai Pattu	71	—	Sakamam tank	52,442 54	639 10	1,800 0 0	589 61	—*e*
Do. ...	Panama	18	—	Rotewewa	—	—	—		
				Naullewewa	—	—	—	925 12	—*g*
				Maha Panama tank	—	—	—		
Trincomalee ...	Koddiyar	6	—	Allai in Topur	50,842 78	1,100 0	1,757 0 32	1,108 27	31,487 56
Do. ...	Kaddukkulam	31	—	Periyakulam in Nilaveli	19,747 91	450 0	3,944 0 27	27 12	5,401 94
Do. ...	Tambalagam	1	—	Kantalai in Tambalagam pattu	80,297 0	940 0	1,186 0 0	1,122 41	—*h*
NORTH-CENTRAL.									
Nuwaragam palata ...	Nuwaragam korale	15	—	Tissawewa	7,483 36	860 0	3,821 0 0*j*	—	—*i*
				Bassawakulam	60,705 74				
				Perunkulama *k*	—	—	—	—	—*i*
				Lunuwewa	—	—	—	—	—
				Turuwila	2,693 62	—	—	—	—
Do. ...	Kende korale	12	—	Nuwerawewa	—	—	2,547 0 0	—	-
				Mahakanadarawewa *k*	—	—	—	—	—
				Maha Galkadawala *k*	—	—	—	—	—

Do.	Kanadara korale	7	—	—	—	—	2,148 0 0	11,826 0	—		
Do.	Kadawat korale	19	—	Madawachchi	26,230 83	420 0	2,733 0 0	—	—g		
				Sangili Kanadara j	—	—	—	—	—		
				Ullukulama } connected tanks j	—	—	—	—	—		
				Pawakulam }							
Do.	Eppawala korale	24	—	Ktiyawa j	—	—	1,436 0 0	—	—		
				Angomuwa j	—	—	—	—	—		
Do.	Willachchiya korale	20	—	Maha Lindawewa j	—	—	2,341 0 0	—	—		
				Maha Willachchiya j	—	—	—	—	—		
				Kuda Willachchiya j	—	—	—	—	—		
				Panikkankulam j	—	—	—	—	—		
Hurulu palata	Kalpe korale	14	—		—	—	2,429 0 0	—	—		
Do.	Kunjuttu korale	3	—	Padawiya j	—	—	1,920 0 0	—	—		
Do.	Mahapotane korale	13	—		—	—	1,590 0 0	—	—		
Do.	Uddiyankulam	12	—	Kiwulekada j	—	—	1,868 0 0	8,499 0	—		
				Manankattiya	—	—	—	—	—		
Do.	Ullagalla korale	9	—	Nachcha Duwa j	—	—	1,904 0 0	—	—		
				Eruwewa (Nndagam)	—	—	—	—	—		
Do.	Matombuwa korale	13	—	Huruluwewa	—	—	1,107 0 0	—	—		
Kalagam palata	Kiralawe korale	8	—		—	—	1,278 0 0	—	—		
Do.	Negampaha korale	5	—		—	—	808 0 0	—	—		
Do.	Maminiya korale	8	—	Maminiyawa	—	—	1,303 0 0	5,617 50	—		
Do.	Unduruwa korale	13	—	Balaluwewa } connected tanks	— l	—	938 0 0	—	—		
Do.	Kalagam korale	11	—	Kalawewa }			2,050 0 0	—	—		
Tammankaduwa	Megoda Sinhala pattu	10	—	Minneriwewa	—	—	1,245 0 0	—	—		
				Giritalawewa	—	—	—	—	—		
				Kawduluwewa j	—	—	—	—	—		
Do.	Megoda Meda pattu	5	—	Topawewa	—	—	530 0 0	2,550 0	—		
				Dumuduluwewa	—	—	—	—	—		
Do.	Egoda pattu	14	—	Oruwakulama j	—	—	487 0 0	—	—		
VAVUNIYA-VILANKULAM.											
Vavuniya-Vilankulam	Kilakkumulai south	2	—	Includes Vavuniya-Vilankulam and Iratperiyakulam tanks, irrigating 950 acres m	38,188 0	600 0	236 0 0	3,498 0 n	—		
Do.	Kilakkumulai north	—	—								
Do.	Nadducheddikulam	—	—								
Do.	Sinnacheddikulam east	—	—								
Do.	Sinnacheddikulam west	—	—								
Do.	Panankamam	—	—								
Do.	Metkumulai	—	—								
Do.	Udaiyar-ur	—	—								
Do.	Melpattu east	—	—								
Do.	Melpattu south	—	—								
MANNAR.											
Mannár	Mantai north	12	—		—	—	8,352 0 0	468 16	—		
Do.	Mantai south	4	—		—	—	2,475 0 0	342 86	—		
Do	Perunkalipattu	1	—		—	—	250 0 0	44 79	—		

a Average from 1881–86. Previous years included in Udagampaha figure.
b Average from 1881–86. Previous years included in Udapalata and Medapalata figures.
c The amount of tithe collected as shown in this return includes the total amount of tithe collected in the division. It is not possible to ascertain what tithe was paid in the irrigated portion of the district only.
d With Maha-oya tank.
e Not yet assessed for water-rate.
f One supply channel and ten anicuts.
g Not completed.
h Water-rate not yet levied.

i When channels have been supplied and the Yoda-ela is working water-rate to the value of Rs. 1,120 and Rs. 540 will be due from the lands under Tissawewa and Bassawakulam respectively, and Rs. 105 will be due on the lands under Madawachchi.
j The items in this column for the North-Central Province show the area at present irrigated in the seventeen korales of the Nuwarakalawiya and Tamankaduwa districts.
k Abandoned Crown tanks.
l Being restored.
m 950 acres is the extent irrigable: 236 acres is the extent now irrigated.
n Average from 1880 to 1887: the average tithe for the last seventeen years cannot be given, as there are no records in this office. No commutation.

Province and Division.	Irrigation District of Division	Number of Tanks	Number of Elas.	Remarks.	Cost of Repairs.	Cost of Maintenance.	Probable Area irrigated.	Average Amount of Tithe collected, 1870–86.	Total Amount of Water-rate collected.
					Rs. c	Rs. c.	A. R. P	Rs. c.	Rs. c.
Mannár ...	Musali north	4	—	—	—	—	2,194 0 0	501 70	—
Do. ...	Musali south	6	—	—	—	—	2,588 0 0	552 82	—
Do. ...	Nannaddan east	10	—	—	—	—	6,300 0 0	990 0	—
Do. ...	Nannaddan west	8	—	—	—	—	5,175 0 0	627 70	—
MULLAITTIVU.									
Mullaittivu ...	Karikkaddumulai north ...	2	1	Includes no ela or tank irrigating more than 640 acres	—	—	250 0 0	320 45	—
Do. ...	Karikkaddumulai south ...	—	—	Includes Tannimurippu, an abandoned tank, capable of irrigating 640 acres or more ...	—	—	—	—	—
Do. ...	Putukkudiyerippu	—	—	—	—	—	—	—	—
Do ...	Mulliyavalai	1	—	Includes no ela or tank irrigating more than 640 acres	—	—	164 0 0	364 52	—
Do. ...	Melpattu north	—	—	Includes Manmalai, supposed to be an abandoned tank, capable of irrigating more than 640 acres ...	—	—	—	—	—
Do ...	Tunukkai	4	—	Includes no ela or tank capable of irrigating more than 640 acres ...	—	—	455 0 0	139 70	—
Do. ...	Karunavelpattu south... ...	1	—	do. do. ...	—	—	78 0 0	79 14	—

IX.—1887.

REPORT

ON THE

WORKING OF THE FISH-CURING SCHEME

BETWEEN

AUGUST 1, 1886, AND JULY 31, 1887.

(In continuation of XX. of 1886.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

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1887.

FISH-CURING YARDS.

The Hon. the AUDITOR-GENERAL to the Hon. the COLONIAL SECRETARY.

No. 771. Audit Office, September 26, 1887.

SIR,—IN his report on fish-curing yards, dated September 11, 1886, Mr. Ravenscroft reviewed the operations carried on between October 15, 1885, and July 31, 1886. The present report treats of the business done between August 1, 1886, and July 31, 1887.

2. The yard at Súriyagahawella, near Tangalla, which proved unsuccessful during the season 1885–86, was not re-opened. The yards re-opened were those at Hambantota and Pattanagalla in the Hambantota District, at Gandara in the Mátara District, and at Udappu in the Puttalam District.

The following statement shows in a comprehensive form the result of the operations carried on at the several yards from August, 1886, to July, 1887:—

Name of Yard.	Period during which the Yard was opened.	No. of Applications	Fish in.		Fish out.		Salt issued.		Value of Salt.		Expenditure by Government.		Quantity of Salt issued to each cwt. of Fish
			cwt.	lb.	cwt.	lb.	cwt	lb.	Rs.	c.	Rs.	c.	lb
Hambantota ...	Aug. 14, 1886 to March 31, 1887...	855	1,331	37	1,045	53	300	84	240	60	149	98	25·24
Pattanagalla ...	February 10 to April 15, 1887 ...	317	468	99	174	87	53	0	53	0	129	40	12·65
Gandara ...	Aug. 1, 1886, to July 31, 1887 ...	610	2,210	11	2,348	49	669	68	724	53	479	77	33·09
Udappu ...	Oct. 20, 1886, to May 7, 1887 ...	1,513	2,738	102	1,599	80	1,141	0	1,141	0	881	50	46·67
	Total ...	3,295	6,749	25	5,168	45	2,164	40	2,159	13	1,640	65	—

3. This statement compares very favourably with that which details the business done in 1885–86, appended to paragraph 17 of Mr. Ravenscroft's last report on the subject (Sessional Paper XX. of 1886, page 4); for it shows that whilst the expense incurred was 87 per centum less than during the first season, the receipts were 224 per centum greater; and the take of fish 133 per centum, and the quantity of fish cured 106 per centum, in excess of that season. The outturn of cured fish is still not very great—only 5,168 cwt.; but from the reports of the Assistant Agents there appears to be good reason to expect the quantity being increased if the experiment is continued. There is a remarkable difference in the proportionate quantity of salt used in curing fish at the different stations, and the reports do not show why the difference should be so great. Thus, whilst at Pattanagalla only 12·65 lb. of salt were used in curing a cwt. of fish, the same weight of fish required 46·67 lb. at Udappu, 33·9 lb. at Gandara, and 25·24 lb. at Hambantota. The reason is no doubt to be attributed to the different descriptions of fish taken at the different places, as shown in the annexures to the Assistant Agents' reports.

4. It would have been satisfactory to have been able to compare the quantity and value of salt sold in fish-curing yards with the average sales for fish-curing purposes previously to the establishment of the yards. This information is not, however, available, as no separate account appears to have been kept of sales to fishers until the yards were established. The following statement shows the result of the fish-curing operations for the two seasons combined. And in view of the satisfactory result of the last season, I recommend that the experiment be continued.

Result of Fish-curing Operations for the period from October 15, 1885, to July 31, 1887.

Name of Yard.	No. of Applications.	Weight of Fish brought to be cured.		Weight of Cured Fish taken out		Weight of Salt issued.		Value of Salt sold.		Expenditure incurred by Government.	
		cwt.	lb.	cwt.	lb.	cwt.	lb.	Rs.	c.	Rs.	c.
Hambantota	2,023	2,548	40	1,890	91	582	84	466	20	693	27
Pattanagalla	541	864	61	378	33	99	74	99	74	300	57
Súriyagahawela	93	99	110	61	4	23	28	23	25	602	17*
Gandara	994	2,890	61	3,162	54	834	103	899	72	1,025	1
Udappu	1,837	3,231	77	2,177	54	1,337	0	1,337	0	1,488	82
Total ...	5,488	9,635	13	7,670	12	2,877	65	2,825	91	4,109	84

5. I append reports relative to the business of the past season from the Government Agents of the Southern and North-Western Provinces, and from the Assistant Agents of Hambantota, Mátara, and Puttalam.

I am, &c.,

R. W. D. MOIR,
Acting Auditor-General.

* Yard not opened during second season.

Enclosure No. 1.

The GOVERNMENT AGENT, Galle, to the Hon. the COLONIAL SECRETARY.

No. 372/174. Galle, July 18, 1887.

SIR,—REFERRING to your letter No. 374 of the 4th instant, I have the honour to state that in the annual report of my Assistant and myself for 1886 will be found a full report on the fish-curing yard in this Province, which may be taken as practically embodying the results of our experience up to date. I request reference may be made to these reports.

2. As regard my own opinion, I think that where the supervision required can be obtained for a moderate sum, the curing yards should be retained—for instance, at Hambantota and Gandara. But where the outlay is necessarily disproportionate to the results, as at Pattanagalla, I would decline to open a yard in future.

3. I would suggest for consideration that instead of opening yards at such places, a drawback might be allowed on each cwt. of fish taken on the coast, at least ten miles north of Hambantota, cured to the satisfaction of the Assistant Agent, Hambantota, and produced to him, and which he was satisfied had not been cured with salt issued at the reduced price. The drawback to be equivalent to the reduction in prices of salt allowed to the curers at Hambantota, and based on the quantity used at the Pattanagalla yards and the quality of the cured fish produced.

4. The canoes at Hambantota all reach the shore right under the Custom-house, and it would be easy to exercise sufficient surveillance over the canoes leaving, to prevent fish cured at Hambantota being taken northward to be brought back for the purpose of claiming this drawback.

I am, &c.,
E. ELLIOTT,
Acting Government Agent.

Enclosure No. 2.

EXTRACT from the Administration Report of the Government Agent, Galle, for 1886.

Fish-curing.—The progress of this industry may be shortly noticed in this connection. There is one yard at Gandara in the Mátara district and two in the Hambantota district, viz., one at Hambantota and another at Patanangala. Others have been tried, but unsuccessfully, as it is found that there is a demand for all the fish caught for immediate consumption all along the coast as far east as Tangalla; and the exceptional existence of the industry at Gandara is due to the Galle traders outbidding the local buyers whenever there is an exceptional haul, which they can afford to do in view of the higher price procurable at Galle for partially-cured fish.

The following is an abstract of the returns furnished by the Assistant Agents :—

	Cost of Establishment. Rs.	Conveyance of Salt. Rs.	Miscellaneous Expenditure. Rs.	Total Outlay. Rs.	Receipts for Salt. Rs.	Fish Cured. cwt.
Hambantota	111¼	—	7½	118¾	241	1,045
Patanangala	99¼	24½	5	128¾	53	175
Gandara	—	—	—	839	450	1,589
				1,086½	744	2,809

Arrangements made during the year have resulted in a considerable saving, especially in establishments, at Hambantota and Gandara, by utilising the services of individuals holding salaried offices who have spare time on their hands, and are willing to accept more moderate remuneration than those specially engaged for the purpose. On the other hand, there has been no outlay on buildings during the year, but as they are all temporary they will have to be periodically renewed. The impossibility of securing cheap supervision at such isolated points at Patanangala will always, I fear, entail a disproportionate outlay on staff at such places.

ENCLOSURE No. 3.

EXTRACT from the Administration Report of the Assistant Government Agent, Hambantota, for 1886.

THE yard at Hambantota was opened on October 15 with every prospect of a good season, but unfortunately strong winds put a stop to the fishing, and the few boats that had already arrived returned to their villages. This continued till the middle of February, when a favourable change in the wind brought all the boats back, and fishing continued uninterruptedly till the end of March. The total quantity admitted into the yard was 1,331 cwt. 37 lb., and the quantity turned out as cured 1,045 cwt. 53 lb. This exceeded last season's outturn by 114 cwt. 34 lb. and 200 cwt. 15 lb., respectively, as will appear from the annexed comparative statement. The increase is the more remarkable since two months of the fishing season were lost from unfavourable weather.

The number of curers who came down this season was 350. Three new gangs came from Gandara and did work on a large scale, taking all the fish they cured back with them to their native villages. The fish was sent to the following places :—

	cwt.	lb.
Galle ...	100	0
Koslanda	500	0
Mátara ...	50	0
Villages in the interior ..	395	53

The number of boats engaged at the height of the season was as follows :—25 large boats for deep-sea fishing and 45 small boats.

There was work for as many more, the catches amounting to 70 cwt. a day on one occasion.

The expenditure for the season from October 15 to March 31 was Rs. 118·73, as against Rs. 543·29 the previous year. The reduction was owing to a clerk of the Kachchéri being employed at Rs. 10 a month instead of appointing a separate official at Rs. 30 a month; also one watcher was employed instead of two. The building materials of last season were utilised this year, so that very little expenditure was incurred under that head.

Patanangala.—The yard here was opened on February 10, and placed in charge of a head guard at Rs. 20 a month and two watchers at Rs. 10 each per month. The average number of boats engaged in fishing was 27, and the number of men 83. The total quantity of fish admitted was 468 cwt. 99 lb., which was 73 cwt. 25 lb. in excess of last year. The total quantity of salt sold was 53 cwt., realising Rs. 53 at Re. 1 per cwt. The yard was closed on April 15, as the season was over and the boats had all returned to the villages for the Siṇhalese New Year.

Annexed are statements showing the operations of both yards for the season.

I consider the satisfactory results of this season as justifying Government in encouraging this industry. The expenditure is small when compared with the large outturn of cured fish—an article of consumption which finds its way into remote villages in the interior where the inhabitants have little enough to vary their daily food.

There is room for improvement in the method of curing, though the fish turned out now are certainly better in taste and condition than what they were two years ago. I think native curers would readily adopt new ways of curing, if a competent person were appointed to teach them.

C. A. MURRAY,
Acting Assistant Government Agent.

Hambantoṭa, April 23, 1887.

Statements.

A.

Abstract of Fish-curing Operations in the Hambantoṭa Yard from October 15, 1886, to March 31, 1887.

	cwt.	lb.
Number of Applications ...	855	
Description of Fish :		
Tóru	38	45
Parau	183	59
Lawayó	96	100
Kelawalló	1	73
Other kinds	1,010	96
Total ...	1,331	37
Fish removed	1,045	53
Salt issued	300	84
	Rs.	c.
Rate per cwt.	0	80
Receipts	240	60

Statement of Expenditure.

	Rs.	c.
Establishment :		
One Head Guard	55	0
One Watcher	56	25
Contingencies	7	48
Total ...	118	73

B.

Abstract of Fish-curing Operations in the Patanangala Yard from February 10 to April 15, 1887.

	cwt.	lb.
Number of Applications	317	
Description of Fish :		
Tóru	5	45
Parau	23	61
Lawayó	19	93
Kalamiyó	154	108
Other kinds	265	16
Total ...	468	99
Fish removed	174	87
Salt issued	53	0
	Rs.	c.
Rate per cwt.	1	0
Receipts	53	0

Statement of Expenditure.

	Rs.	c.
Establishment :		
One Head Guard	50	0
Two Watchers	49	28
Contingencies :		
Cost of conveying salt—carriage ...	24	50
Other items	5	62½
Total ...	129	40½

Enclosure No. 4.

REPORT by the Assistant Government Agent, Mátara, on the Gandara Fish-curing Yard.

Institution.—The establishment of this yard was sanctioned by Government in January, 1886, and it was opened towards the end of that month.

Object.—The object of these yards is that, by giving the fishermen salt at the lowest possible price, encouragement may be given to the development of our fisheries, and thus at the same time secure an increased, cheap, and wholesome food-supply, and create a new industry to the benefit of both the people and the revenue. It was thought, and results have shown rightly so, that the fish-supply hitherto was more or less restricted to the demand in the more immediate neighbourhood of our fishing villages, and that with increased facilities for curing the fish there would not only be less waste but a larger supply.

Working.—It is satisfactory to be able to report that this object is being gradually attained. It is true that the enterprise has not yet attracted the labour or capital from other parts of the Island, which, before the work began, too sanguine anticipations of its success predicted. It should be remembered, however, that the enterprise was more or less of an experiment, and had to encounter all the usual disadvantages of Government experiments, viz., want of accurate information on almost every important statistical point in connection with the trade, the inability of the fishermen from want of capital to do more than gradually take advantage of the profits offered them, and the distrust of those with capital who hesitate to invest it, natively, doubting Government *et dona ferentes!* It is therefore the more satisfactory to be able to show that, in spite of these drawbacks, the enterprise has even now become a success.

Profit and Loss.—This success is best shown by the fact that the average monthly quantity of fish brought into the yard during this year has been over 40 per cent. in excess of the average for last year. The quantity of fish brought in during 1886 was 80 tons, and for the first seven

months of this year 65 tons. The expenditure of last year was Rs. 839 (consisting of the following items: building Rs. 115·24, establishment Rs. 587·32, cost of salt and contingencies Rs. 191·87), while the receipts were Rs. 450. The cost of the establishment, which on my assuming office I found had been appointed on a scale proportionate to the too sanguine estimates of the work that would be required, was then gradually reduced, and from the commencement of this year the cost has been Rs. 12·50 a month instead of the Rs. 55 a month paid for the first eight months of last year. This reduction in expenditure has been effected without in any way impairing the efficiency of the supervision required in the yard, and at the end of this year will show a decrease in the expenditure as compared with revenue, which will be satisfactory.

In giving these figures of revenue and expenditure, it may be observed that such statements are apt to be misleading when given in connection with an enterprise the profit from which is not directly pecuniary, and that they should not be taken, as usual, as the test of the profit and loss on the account.

General.—Fishing at Gandara is carried on all the year round, with only short intermission during the bursts of the monsoon, and, as has been shown, the excess in supply for curing purposes has been materially increased. This has been so far effected without any increase in the number of new boats or men employed, the increase being secured by the old boats being less frequently laid up, and the men more busily employed. The number of boats in this village is 167, and the average number of fishermen employed is 650. Increased capital will now, I have no doubt, gradually supply new boats and attract more fishermen, and the results will be a further increase in the quantity of fish caught.

The fish-supply, I believe, to be practically inexhaustible, though want of proper fishing regulations and unscientific capture might seriously diminish it. By creating an increased demand we have already (only temporarily, it is true) created an increased supply of over 40 per cent., and this, I am confident, can be still further increased to 100 per cent., even with the appliances at hand. If this is possible with the clumsy and unscientific gear in use, what results might we not expect from the use of the improved and scientific appliances of modern invention as used by the fishermen of England and America! I know of fishermen in a remote Cornish fishing village, to whom the Gandara Bay would present visions of an *El dorado*—visions to be partly dissipated when the glittering heap of spoil should be found to be of comparatively little value owing to want of market, means of transport, or climatic causes. With an improved system of curing, such as these same Cornish fishermen practise at home for the export of hundreds of tons of pilchardes, these obstacles would in great measure be overcome, and the profit to be gained, not only in the Gandara Bay, but all along the coast, would still be sufficient to bewilder more sober men. To provide a market for fresh fish is of course at present hopeless, and one instance will be sufficient illustration of the loss which is suffered on that account. Red mullet, well named the "woodcock of the sea," a luxury for which a London club or hotel would charge half a crown, can here be got almost daily at from 2c. to 6c. each, or should the epicure require a "John Dory" it can be obtained, though not so frequently, at about the same price.

It is needless for me to point out how the fish-supply along almost the whole coast of the Southern Province is one of the strongest arguments in favour of railway extension to this district.

The fishing industry is one in which from early association I take the greatest interest, though I must confess its surroundings in this country are hardly the same as those of my previous experience, and I am therefore diffident in reporting at present with any degree of authority on the details of a system with which I hope, if I remain here, to become more fully acquainted, and to be able therefore in my next report to deal with more satisfactorily.

H. P. BAUMGARTNER,
Acting Assistant Government Agent.

September 3, 1887.

Statements.

A 1.

Abstract of Fish-curing Operations in the Gandara Yard from August, 1886, to July, 1887.

Number of Applications		610
Description of Fish:	cwt.	lb.
Seer	109	94
Balaya	490	72
Hurullas	86	57
Paravas	11	79
Other kinds	1,511	45
Total ...	2,210	11
Salt issued	669	68
	Rs.	c.
Rate per cwt.	1	5
Receipts	724	53
	cwt.	lb.
Fish removed	2,348	49

A 2.

Abstract of Charges incurred in the Gandara Yard from August, 1886, to July, 1887.

	Rs.	c.
Buildings:		
Repairs	20	0
Establishment:		
Superintendent	157	22
Peons	132	60
Contingencies:		
Cost of conveying salt—carriage ...	166	85
Other items	3	10
Total ...	479	77

Enclosure No. 5.

The GOVERNMENT AGENT, Kurunégala, to the Hon. the COLONIAL SECRETARY.

No. 364/7,094. Kurunégala Kachchéri, August 3, 1887.

SIR,—IN reply to your letter No. 310 of the 4th ultimo, I have the honour to annex copy of a report by my Assistant at Puttalam on the fish-curing yard in his district.

2. As stated by Mr. Lushington, this is the first complete season which has given any result, and it is perhaps too soon to pronounce a judgment upon those results. They may, however, be

shortly stated as an expenditure by Government of Rs. 2,433·26 upon the production of 1,600 cwt. of improved salt fish, for which the curers will perhaps (though it is by no means certain) get a better price than they have hitherto been able to realise.

3. There is nothing to show that the quantity of fish caught or cured is larger than in previous years, or that anybody but the curers have benefited by the liberality of the Government.

4. The Government contribution, however, is not intrinsically large or a very heavy drain upon the resources of the Colony, and it might therefore be safely continued for a year or two more, at the expiration of which period it will be seen whether the production of salted fish has steadily increased or remained stationary.

I am, &c.,

P. A. TEMPLER,
Government Agent.

Sub-enclosure.

REPORT by the Assistant Government Agent, Puttalam, on the Udappu Fish-curing Yard.

THE fish-curing yard at Udappu was re-opened for the fishing season on October 20 last, and was kept open until May 7, 1887, when an early burst of the little monsoon put an end to the fishing.

The fish-curers took up the scheme this season very readily, and in a very short time the yard was full, and it became necessary to extend the yard so as to double the area occupied by the curers.

During the season there were 1,513 applications for admission to the yard, 2,738 cwt. of fish were brought to be cured, 1,141 cwt. of salt were issued, and 1,600 cwt. of cured fish were removed. This means a very considerable amount of wholesome food, and the fish cured in the yard appeared to me far more wholesome and better cured than that which is ordinarily to be found in the bazaars. I never saw any fish imperfectly cured, and there was never any smell of putrid fish in the yard or its surroundings, as all the refuse was speedily carried off by crows.

The actual expenditure on the yard during the season amounts to Rs. 881·50, as follows :—

	Rs.	c.
Buildings	194	80
Establishment	381	70
Transport of salt	305	0
Total ...	881	50

while the sale of salt realised Rs. 1,141, or Rs. 259·50 in excess of the expenditure.

As this has been the first complete season during which the yard has been open, it is impossible to judge with any degree of accuracy to what extent the encouragement given by Government to the fish-curing industry has given an impetus to the business, but it may safely be inferred, that if there is any increase in the figures next year, such increase will mean an ncrease of business, as all the curers this year have taken advantage of the yard.

The Government aid may be appraised as follows :—

	Rs.	c.
Difference between value of 1,141 cwt. of salt at Re. 1 and Rs. 2·36 ...	1,551	76
Cost of yard and establishment	881	50
Total ...	2,433	26

or Rs. 1·52 for each cwt. of fish cured. This contribution must add considerably to the profits of the fish-curers, and ought, if maintained, to cause a reduction in the price of cured fish.

A very noticeable change will be observed if the figures are compared with those of last season in the ratio between the weight of the fresh and the cured fish. This arises from a mistake having been made last year with regard to the instructions; and the weight of fish removed from the yard is that of *salted* but not *cured* fish. This season there was no such mistake.

Towards the end of the season an experiment was tried at the request of the curers, of opening a store for the sale of salt to be used outside the yard, the salt being sold at Rs. 2·70. But this was commenced very late, and the season terminated so abruptly, that it is impossible to say whether or no the scheme is likely to prove successful. Certain it is, that if it does prove successful, the profits made by sale of the salt will fully make up for the expenditure on the yard.

I annex tabular statements showing the operations and expenditure on the yard :—

A 1.

Abstract of Fish-curing Operations in the Udappu Yard, from October, 1886, to May 7, 1887.

Number of Applications		1,513	
Description of Fish :		cwt.	lb.
Arukkula		37	98
Vempary		61	26
Kaṭṭá		73	13
Surrai		894	6
Other kinds		1,672	71
Total ...		2,738	102
Salt issued		1,141	0
		Rs.	c.
Rate per cwt.		1	0
Receipts		1,141	0
		cwt.	lb.
Fish removed		1,599	80

A 2.

Abstract of Charges incurred in the Udappu Yard, from October, 1886, to May, 1887.

	Rs	c
Buildings :		
New Works	194	80
Establishment :		
Superintendents	181	20
Peons	200	50
Contingencies :		
Cost of conveying salt—carriage ...	305	0
Total ...	881	50

Puttalam Kachchéri,
June 10, 1887.

C. M. LUSHINGTON,
Acting Assistant Government Agent.

X.—1887.

PUBLIC INSTRUCTION DEPARTMENT.

REVISED CODE FOR AIDED SCHOOLS, 1888.

TOGETHER WITH

NOTIFICATIONS OF AMENDMENTS.

PREPARED BY

THE DIRECTOR OF PUBLIC INSTRUCTION.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

CODE FOR AIDED SCHOOLS, 1888.

PRELIMINARY CHAPTER.

1. A sum of money is annually voted for grants-in-aid.

2. These grants are administered by the Department of Public Instruction, hereinafter called the Department.

3. The object of the grant is to *aid* local exertion, under certain conditions : (*a*) to maintain schools ; and (*b*) to train teachers.

4. Aid to maintain schools is given by annual grants to the managers, conditional upon the attendance and proficiency of the scholars, and the state of the schools.

5. No grant is made in respect of any instruction in religious subjects.

6. Officers are employed to verify the fulfilment of the conditions on which grants are made, and to report the results to the Department. For the convenience of managers the instructions of the Department, issued to these officers, will be published annually as an appendix to the rules and regulations for grants-in-aid, hereinafter called the Code.

7. These officers are appointed by Government and are called inspectors or assistant inspectors.

8. No grant is paid except on a report from one of these officers that the conditions of the grant have been fulfilled.

9. The Department, at the time of agreeing to make grants to schools, informs the managers in what month to look for the inspector's annual visit. This month remains the same from year to year, unless the Department informs the managers of a change. Notice of the day of the inspector's annual visit is given beforehand to the managers.

10. An inspector, or assistant inspector, may visit any aided school at any other time without notice.

11. No undertaking should be commenced in general reliance upon aid from Government. Grants cannot be claimed for any school, irrespective of the circumstances of the case and the limits of the sum at the disposal of Government. Should a grant be refused the reason for its refusal will be communicated to the applicants.

12. As a general rule, no application will be entertained for aid to a boys' school when there already exists a flourishing boys' school of the same class within two miles of the proposed site, without some intervening obstacle, unless the average daily attendance for six months prior to the date of application exceeds 60. An anglo-vernacular school will be considered as of the same class as a vernacular school.

12 *a*. Every application for the registration, change of site, or transfer of management of a school will be notified in the *Government Gazette*.

13 The proprietors of a school must appoint a correspondent with the Department, who will be hereinafter called the manager, and must give notice of any change of correspondent. Teachers cannot act as managers of, or correspondents for, the schools in which they are employed.

13 *a*. Before any grant is made to a school, the Department must be satisfied that the school is not carried on under the management of any person or persons who derive emolument from it.

14. No article in this Code shall be revoked, altered, or amended without the previous sanction of the Governor and Executive Council, and any such revocation, alteration, or amendment shall be published in the *Government Gazette*.

15. The Code shall be printed each year in such a form as to show separately all articles cancelled, or modified, and all new articles since the last edition, and shall be laid on the table of the Legislative Council within one calendar month from the opening of the session.

16. The schedules annexed to the Code, including the instructions issued to Inspectors, shall have the same effect as the articles of the Code, and shall be subject to the provisions of articles 14 and 15.

CHAPTER I.

ANNUAL GRANTS.

SECTION I.—*Preliminary Conditions.*

17. The managers of aided schools must furnish all returns that may be required by the local Government or by the Department.

18. Managers of private schools unconnected with any recognised society or public body will be required to give substantial security for the maintenance of such schools for a period of not less than three years before they can be entered on the register. A form of bond to be entered into in these cases may be obtained from the Director of Public Instruction.

19. Applications for grants must invariably be made on forms supplied for that purpose by the Department.

20. Before any grant is made to a school, the Department must be satisfied that—

(*a*) Scholars are being instructed in at least two of the standards set forth in schedules B, D, E.

(*b*) The average daily attendance for three months prior to the application is not less than—

(*a*) *In towns.**

In a boys' school	50
In a girls' school	30
In a mixed school of boys and girls ...	60

(*b*) *In villages.*

In a boys' school	30
In a girls' school	20
In a mixed school of boys and girls ...	30

(*c*) *In C schools (vide infra).*

In a boys' school	15
In a girls' school	10
In a mixed school of boys and girls ...	15

(*c*) The girls in a girls' school are taught plain needle work as part of the ordinary course of instruction, and that the head teacher is a female.

(*d*) Registers of admission and daily attendance are accurately kept, and that the rules for keeping school registers printed on the first page thereof are carefully carried out, and that the registers are marked every time the school meets, and that adequate time is allowed in the Time Table for marking the registers, and that the returns furnished are trustworthy, and that

(*e*) The school buildings, furniture, and apparatus are sufficient according to the requirements for registration, and in good repair.

21. Any school accepted by the Department which ceases to fulfil any of the above conditions, or which fails to earn 50 per cent. of passes at the annual examination, will, unless satisfactory reasons be furnished to the Department, be removed from the list of aided schools. If the manager wishes to revive at any time a school removed from the list, application must be made in the same form as for a new school.

22. Grants are made on the same terms to all practising schools attached to training schools.

SECTION II.—*Registration.*

23. Schools may be registered for grants-in-aid either as vernacular, Anglo-vernacular, or English schools, and as primary, middle, or high schools.

Vernacular Schools.

24. Vernacular schools may be registered as primary, middle, or high schools.

Vernacular primary schools are schools in which no scholar is presented for grant above standard V.

Vernacular middle schools are schools in which scholars are presented for examination in any standard above standard V.

No vernacular primary school will be examined as a middle school unless it has presented one or more successful candidates in the Vth standard at the last examination.

A vernacular middle school may include a primary school.

Vernacular high schools are schools in which scholars are instructed in classical Siṅhalese, Sanskrit, Páli, or Tamil literature. Grants to such schools are only made in exceptional circumstances, and every application for such schools will be considered by the Government on its special merits.

Anglo-Vernacular Schools.

25. Middle vernacular schools may present for examination in English all or any scholars who have passed the IVth standard. Such schools are hereinafter called Anglo-vernacular schools. No school will be examined as an Anglo-vernacular school unless it has been registered as such during the year preceding the examination. Scholars may be presented for English passes in any of the four English standards, but no scholar will be examined twice in the same standard.

English Schools.

26. English primary schools are schools in which no scholar is presented above the Vth standard.

English middle schools are schools in which scholars are presented for examination in standards VI., VII., or VIII.

English high schools are schools in which scholars are presented for examination at the Cambridge local examination, or for Matriculation at the University of Calcutta or Madras, or in any of the specific subjects of examination enumerated in Schedule C.

An English middle school may include a primary school, and a high school may include middle and primary schools.

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* NOTE.—The places to be considered as towns for the purposes of this Code are as follows :—

Western Province.	*Within*
Colombo ...	Municipal limits.
Kalutara ..	Police limits.
Negombo ...	do.
Southern Province.	
Galle ...	Municipal limits.
Mátara ...	Police limits.
Central Province.	*Within*
Kandy .	Municipal limits.
Eastern Province.	
Batticaloa ...	Police limits.
Trincomalee	do.
Northern Province.	
Jaffna ...	A radius of 1½ mile from the Fort

No English primary school will be examined as a middle school unless it has presented one or more successful candidates in the Vth standard at the last examination.

27. No school will be registered as an English high school unless the Department is satisfied :—

(*a*) That the teaching staff is sufficient in number and quality.

(*b*) That the managers are in a position to guarantee the stability of the school.

28. Middle and primary schools may be registered as A, B, or C schools.

A Schools.

(*a*) Before a middle or primary school is registered as an A school, the Department must be satisfied that the school buildings are expressly adapted for school purposes ; that they afford sufficient accommodation, and are kept in good repair.

(*b*) That the school is not surrounded by other buildings to such an extent as to exclude light and air, and that particular regard is paid to health and cleanliness both in the persons of the pupils and in the arrangements and condition of the school premises.

(*c*) That the supply of school materials, maps, and other appliances for teaching, desks, black-boards, and other furniture, books, writing materials, &c., are in sufficient quantity, and in good order.

(*d*) That the regular work of the school is conducted in an orderly and disciplined manner, and in accordance with a satisfactory time-table.

B Schools

29. Upon the report of the inspector that an A school does not fulfil these conditions, notice shall be given on form to the manager, and if at the next annual examination the requirements of the Code are not satisfied, the result payments will be made on a lower scale, the value of a pass in any standard or subject being Re. 1. The school will then be classed as a B school.

30. New schools may be accepted provisionally as B schools until the manager has time to complete new buildings and provide suitable furniture, but no school shall be allowed to remain on the B list for more than one year. After that time, if the Department is not satisfied, it will be removed.

Examination.

31. Managers of schools may claim after the annual examination—

(*a*) For every scholar presented in standards I.—VIII., a sum calculated on passes achieved according to schedules F, G.

(*b*) No grant will be allowed for any scholar who shall have received less than nine months' instruction, during the twelve months immediately preceding the examination, in the school in which he is examined, and who shall have made less than 100 attendances.

NOTE.—In reckoning nine months' instruction, the month fixed for the examination may be included. The month of admission is not to be included unless the scholar is admitted on the first school day of the month.

(*c*) At a first examination, scholars may be grouped in any standard fixed by the manager, but scholars may not be presented a second time for examination under the same standard unless they fail to pass in more than one of the first three heads. If they fail to pass in more than one of the first three heads they will be considered to have failed altogether, and no result payment can be claimed for them.

(*d*) No grant will be allowed for any scholar over twenty years of age on the day of examination.

(*e*) No grant will be made for any scholar in standard I. who is over twelve years of age.

(*f*) No scholar shall be eligible for examination unless he shall have been protected from small-pox by having previously had that disease or by vaccination.

(*g*) Schools in which the scholars presented fail to earn 20 per cent. of passes in any one of the subjects, *Reading*, or *Writing*, or *Arithmetic*, will receive result payments as B schools.

(*h*) Falsification of the register will involve forfeiture of half the grant for the year, and in the case of certificated teachers the certificate will be suspended.

(*i*) Due notice having been given of the date of examination of any school, if the inspector finds that the school is not ready on the day of his visit, the expenses of the inspector's second visit will be deducted from the grant earned by the school ; but the Department does not bind itself to hold a deferred examination.

(*k*) No grant can be claimed for any girl taught in a school registered as a boys' school, or for any boy over ten years of age taught in a school registered as a girls' school. No school will be examined as a mixed (boys' and girls') school unless registered as such.

(*l*) The grants will be paid, if possible, within three months of the day of examination.

C Schools.

32. Schools in outlying, sparsely-populated, and neglected districts, unable to fulfil the conditions attached to A schools, may be registered as C schools under the following regulations :—

(*a*) All scholars presented for examination without limit of attendance will receive the same grant as A schools for passes achieved, but no child can be examined twice in the same standard.

(*b*) An average daily attendance for three months of fifteen boys or ten girls, or fifteen boys and girls in a mixed school, will be accepted as sufficient in application for registration as C schools.

(*c*) In all other respects the regulations applying to A schools will apply to C schools

INDUSTRIAL SCHOOLS.

33. Applications for grants-in-aid to industrial schools will be entertained on the following conditions :—

(*a*) The school shall teach a trade or trades to be approved by the Department.

(*b*) The workshops must be sufficiently provided with appliances for elementary instruction in the trade or trades to which the school is devoted.

(*c*) The master or mistress of each workshop must be qualified to teach his or her trade.

34. The managers of an industrial school registered by the Department may claim, in addition to the general grants, for each pupil above the age of ten years certified to have been in regular attendance for nine months since the previous annual inspection of the school, and to have received instruction in the workshop for not less than three hours daily, a grant of five rupees.

Form of Certificate.

I, *A. B.*, manager of the registered industrial school , certify that every pupil on this list has regularly attended this school for nine months since the date of the last annual inspection, and has received instruction in the trade specified opposite to his or her name for three hours daily on not less than 100 days.

Name.	Age.	Trade.	Name of Attendances.

GIRLS' DAY SCHOOLS.

35. In girls' day schools an allowance will be made for needlework. (Schedules F, G.)

Each girl shall be required to produce a specimen of needlework done in the presence of the Inspector, according to the following scale of Standards :—

STANDARD I.

Neat hemming.

STANDARD II.

Hemming, sewing, and felling so as to be able to make a bag ; also patch-work.

STANDARD III.

The former stitches and back-stitching, to be able to make pillow-cases; also marking.

STANDARD IV.

As before, and to put in a neat gusset so as to make their own jackets.

STANDARD V

Stitches as before, also button holes and darning, and to be able to cut out a jacket.

STANDARD VI.

As in the previous standards; also to be able to cut out and make under-jackets. Knitting *may be taught in this Standard.*

STANDARD VII.

As before ; also to be able to put in a neat patch and to make a little child's frock, pinafore, or shirt ; knitting.

STANDARD VIII.

As before, and to cut out and make a plain shirt with yoke back and gathered sleeves put into wristbands ; knitting.

GIRLS' VERNACULAR AND ANGLO-VERNACULAR BOARDING SCHOOLS.

36. In girls' vernacular and Anglo-vernacular boarding schools the value of a "pass" will be twice the value of a corresponding "pass" in day schools. (Schedule G, Note.)

37. When the day-girls do not amount to more than one-fourth of the number of boarders, their passes will be computed at the same rate as boarders. When the number of day-girls is in excess of one-fourth of the number of boarders, their passes will be calculated as for scholars in day schools. Applications for grants in favour of girls' vernacular and Anglo-vernacular boarding schools will be entertained without reference to the limitations prescribed in section 1, ¶ 20.

CHAPTER II.

SECTION I.

Teachers.

38. No new boys' school will hereafter be accepted as a grant-in-aid Anglo-vernacular, or vernacular A school, unless the principal teacher holds a certificate or license from the Department, provided that in the case of vernacular schools desired to be established in backward districts, special circumstances may be submitted to the Department.

39. The certificates issued will be of three classes.

40. A third-class certificate will entitle the teacher to hold the appointment of principal teacher in a primary school.

41. A second-class certificate will entitle the teacher to hold the appointment of principal teacher in a middle school.

42. A first-class certificate will be given to trained teachers who hold second-class certificates only after five years' service either in the same school or in different schools under the same management: it will entitle the holder to an annual payment from Government in augmentation of salary, upon the following conditions:—

(1) That the teacher shall have passed through the full course of a Government or aided training school, and shall have passed the several examinations prescribed for such training schools.

(2) That the Inspector's report of the teacher's work for the year be a favourable one.

NOTE.—The payment from Government shall be in the form of a result payment. In schools where not less than 100 children are presented for examination, with a percentage of passes of not less than 80, the teacher shall receive a payment of 15 per cent. on the amount of grant earned by the school. In schools where the presentations for examination are not less than 50, with a percentage of passes of not less than 80, the teachers shall receive a payment of 10 per cent. on the amount of grant earned. And in schools where the presentations for examination are not less than 30, with a percentage of passes of not less than 80, the teacher shall receive a payment of 5 per cent. on the grant earned.

43. A certificate of the third class will be issued to every registered pupil-teacher who has completed three years' approved service as pupil-teacher in conformity with the rules of the Department: it will be issued provisionally, and confirmed after two years' satisfactory probation, either as principal teacher of a primary school or as assistant teacher of a middle school, on the certificate of the manager.

44. Provisional third-class certificates will be confirmed also after one year's training in an aided training school, provided that the holder shall have satisfied the examiners in the first year's examination.

45. A certificate of the second class will be issued to all students of a training school inspected by the Department who have completed two years' residence and passed the final examination to the satisfaction of the examiners appointed by the Department.

46. This certificate will not entitle the teacher to hold an appointment as head teacher of an Anglo-vernacular school unless he has passed the qualifying examination in English appointed for each year of the training school course.

47. A certificate of the second class will also be issued to any holder of a third-class certificate after three years' continuous service in the same school or in different schools under the same management, on the recommendation of the manager; provided that the candidate has passed the final examination required of the students of training schools. It will be issued provisionally and confirmed after one year's satisfactory probation as teacher of a middle school, certified by the manager and the Department.

48. It shall be in the power of the Director to issue certificates of the second or third class to any teacher, who holds a certificate of competency from any recognised Normal school or training establishment in Europe or in any part of the British Empire or in America.

48 *a*. Licenses will be issued to teachers in grant-in-aid schools on the following conditions:—

A.—Licenses will be of two classes. Licenses of the second class will entitle the holder to hold an appointment as head teacher in a primary vernacular school. They will be issued to candidates who passed a satisfactory examination in the following subjects:—

Reading.—Good fluent reading, with comprehension, of a vernacular newspaper, public notice, school manual, or other book or document printed in correct modern Tamil or Sinhalese.

Writing.—To write a specimen of the penmanship used in setting copies of text-hand and small-hand; dictation.

Arithmetic.—As for VIth standard of vernacular schools, with vulgar fractions.

Geography.—Ceylon and Asia.

School Management.—Teaching a standard not higher than standard IV. in the presence of the examiner. Method of keeping school registers. Examination in the Code for grant-in-aid schools.

B.—Licenses of the first class will entitle the holder to hold an appointment as head master of a middle vernacular or Anglo-vernacular school. They will be issued to candidates who passed a satisfactory examination in the following subjects:—

Reading.—Reading with fluency and expression from a classical vernacular book, with grammatical analysis.

Writing.—A short essay or letter; to write a specimen of the penmanship used in setting copies.

Arithmetic.—As for standard VIII.

History.—History of Ceylon.

Geography.—As for standard VIII.

School Management.—(1) To teach a class in the presence of the Inspector; (2) To answer questions in writing on the following subjects:—

(*a*) The different modes of organising a school;
(*b*) The keeping of registers; the Code;
(*c*) Notes of lessons; questions of discipline.

Candidates for Anglo-vernacular licenses will be required to pass in the English subjects required for the VIIIth standard in Anglo-vernacular schools.

Annual examinations for licenses will be held at such centres as shall be found most convenient for candidates.

49. No new principal teacher shall hereafter be appointed to any vernacular or Anglo-vernacular boys' school in receipt of grant, unless he holds a certificate or license of the Department. Provided that in the case of schools in backward or remote districts, special circumstances may be submitted to the Department.

50. After the 1st day of January, 1888, no grant will be continued to any vernacular or Anglo-vernacular boys' school which is not in charge of a teacher holding a certificate or license of the Department, in terms of the foregoing clauses; that is to say, a vernacular primary boys' school to earn a grant must be taught by a head teacher holding a 3rd class certificate or a 2nd class license, and a vernacular middle boys' school must be taught by a head teacher holding a 2nd class certificate or a 1st class license, while an Anglo-vernacular boys' school must be taught by a head teacher holding an Anglo-vernacular certificate or license.

Provided always that in the case of schools in backward or remote districts, special circumstances may be submitted, and the Governor may dispense with the required certificate or license.

Section II.

Pupil Teachers and Training Schools.

51. In order to enable managers to meet the future requirements of the Code, by the systematic training of students for the profession of teaching, grants will be made for (*a*) pupil-teachers and (*b*) training schools.

52. Pupil-teachers are boys or girls selected by the manager to assist the teacher of a school in maintaining discipline, and instructing the lower classes.

53. In making this selection the manager is required only to observe the following regulations:—

(1) Before pupil-teachers are submitted to the Department for registration, application must be made in the form prescribed (schedule H); they must have passed the Vth or a higher Standard in Reading, Writing, Arithmetic, and at least one additional subject.

(2) Pupil-teachers at the date of registration must be not less than 14 years of age, completed.

54. Pupil-teachers will be registered in such schools only as satisfy the following conditions:—

(*a*) The whole school must be favourably reported on by the inspector as regards

1.—Discipline.	3.—Premises, furniture, apparatus, &c.
2.—Instruction.	4.—Stability.

(*b*) The school must have obtained a grant for at least three years preceding the date of application, if an English school, in standards VI., VII., VIII.; if a vernacular school in standards V., VI., VII.

(*c*) To entitle a school to one pupil-teacher, the average number of pupils examined for a grant during each of the three preceding years must be not less than forty; for every additional fifty in average attendance during three successive years, a school will be entitled to an additional pupil-teacher; but not more than two pupil-teachers will be registered for any school during the same year.

55. The course of studies for pupil-teachers is laid down in schedules I and J.

56. Every pupil-teacher presented for examination must produce a certificate from the manager of his school in the prescribed form (schedule K).

57. No pupil-teacher can be presented for his first examination within nine months of the date of registration.

58. The inspecting officer examining the school for a grant will at the same time examine the pupil-teacher in the subjects laid down, and will require him or her to give a lesson in his presence to one of the lower classes. If he is satisfied with the candidate's proficiency, he will sign the certificate, upon which the manager may claim a grant.

59. If a candidate fail to satisfy the inspector, he may be presented again at the next annual inspection, in the same subjects of examination, but no result-payments for a candidate who fails can be claimed at the time of failure.

60. Grants will be made for pupil-teachers as follows:—

First year's Examination.

English schools, Rs. 50 + grant in full for VIth standard pass.
Anglo-vernacular and vernacular, Rs. 30 + grant in full for VIth standard pass.

Second year.

English schools, Rs. 75 + grant in full for VIIth standard pass.
Anglo-vernacular and vernacular, Rs. 50 + grant in full for VIIth standard pass.

Third year.

English schools, Rs. 100 + grant in full for VIIIth standard pass.
Anglo-vernacular and vernacular, Rs. 75 + grant in full for VIIIth standard pass.

Note.—The additional grant for a pass in any standard will not be paid on account of any pupil-teacher who has already earned a grant in the same standard.

Training Schools.

61. Grants-in-aid will be made to vernacular and Anglo-vernacular training schools, for male or female teachers, under certain conditions.

62. The Department must be satisfied that

(*a*) The staff of teachers is sufficient in number and quality ;
(*b*) The managers are in a position to guarantee the stability of the school ;
(*c*) There is a practising school, in which students may learn the exercise of their profession, either immediately connected with the training school or within easy reach, and under the same management.

GRANTS TO TRAINING SCHOOLS.

63. An examination of candidates for admission to training schools will be annually held in the month of December.

64. The examination will extend to all the subjects required of pupil-teachers in the course of their engagement.

65. Candidates who desire to qualify as Anglo-vernacular teachers will have to satisfy the examiners in the English part of the examination.

66. The candidates are selected and admitted to the examination by the authorities of each school on their own responsibility, subject to no other conditions on the part of the Department than that the candidates—

(*a*) Intend *bonâ fide* to adopt and follow the profession of teacher;
(*b*) Having been pupil-teachers, have successfully completed their engagement;
(*c*) Not having been pupil-teachers, or not having completed their engagement as pupil-teachers, will be more than seventeen years of age on the 1st of January next following the date of examination. At each examination a certain number of successful candidates, in proportion to the number of vernacular and Anglo-vernacular aided schools, will be appointed Queen's scholars.

67. The number of Queen's scholarships to be competed for annually by boys is at present fixed at 5 per cent. on the number of vernacular and Anglo-vernacular aided boys' schools.

68. The number of Queen's scholarships to be competed for by girls is fixed at 10 per cent. on the number of vernacular and Anglo-vernacular girls' schools.

69. The Queen's scholarships will be awarded to the most successful candidates presented for examination by each school, in the order of merit ; provided that the number of Queen's scholarships to be allotted to any manager or managers shall not exceed 5 per cent. upon the number of vernacular and Anglo-vernacular schools under the same management.

70. At the end of one year after admission to a training school as a Queen's scholar, an examination will be held in the subjects prescribed in schedule L, and the managers will be entitled to a grant of 100 rupees for every Queen's scholar who passes such examination satisfactorily. Queen's scholars who fail to obtain one-third of the marks in reading, or in writing, or in arithmetic, will forfeit their scholarships.

71. At the close of the second year there will be a final examination, and for each successful Queen's scholar the manager will receive the final sum of 150 rupees, making up the total value of the scholarship.

CHAPTER III.

SECTION I.

Superior Instruction.

72. The assistance granted by the Department for the encouragement of superior instruction will be in the form of:—

1st —Public examination.
2nd.—Payments on the results of examinations.
3rd.—Scholarships and exhibitions

PUBLIC EXAMINATIONS.

73. The examinations conducted by the Syndicate of the University of Cambridge for local examinations, hereinafter styled the senior and junior local examinations, will be the standard of examination, and will take the place of the local examination hitherto held No marks obtained for the subject of religious knowledge will be allowed to count in awarding the scholarships, exhibitions and prizes referred to in this Code.

The scholarships and prizes awarded are now thrown open to all candidates, whether coming from Government and Grant-in-aid schools or not.

JUNIOR LOCAL EXAMINATION.

74. On such day in each year as may be appointed the junior local examination will be held in Colombo, Kandy, Galle, and Jaffna, and in other places if it be required and found expedient.

75. The certificates of the University will only be awarded to students who pass this examination, except in the cases otherwise provided for, if under sixteen years of age on the 1st day of January succeeding the examination. Local certificates, prizes, and exhibitions may be gained by all students under seventeen years of age on the last day of the month appointed for the examination.

76. For every candidate fulfilling the conditions of age who shall pass this examination to the satisfaction of the examiners, the manager of the school at which he has received his education will be entitled to claim for each subject in which the candidate passes a grant of five rupees.

77. A book prize will be given to every candidate for each subject in which he passes in honors.

78. Three exhibitions—one of the value of rupees 240 per annum, and two, each of the value of rupees 120 per annum, tenable for three years either at the Royal College or at any registered high school, will be awarded every year to the three best candidates who shall pass this examination.

SENIOR LOCAL EXAMINATION.

79. The senior local examination will be held under the same general conditions as the junior examination, on such day as may be appointed in each year The result payments, prizes, and

scholarships will be open to candidates who have not completed their 19th year on the last day of the month appointed for the examination.

80. For every candidate fulfilling the conditions of age who shall pass this examination to the satisfaction of the examiners, the manager of the school at which he has been educated will be entitled to claim, for each subject in which the candidate passes, a grant of ten rupees.

81. A book prize will be given to every candidate for each subject in which he passes in honors.

82. One scholarship of the value of £150, tenable for four years, will be awarded at these examinations to the student who, having been resident in the Island for the five years next before the examination, shall pass the best examination in honors The successful candidate will have to proceed to one of the Universities of Oxford, Cambridge or Dublin, or to one of the Scotch Universities, or to such other place of education as shall be approved of by the Governor, and will be required to gain such certificates of good conduct and progress as are usually awarded to meritorious students

SECTION II.

Specific Subjects of Secular Instruction.

83. If the time-table of a school in use throughout the year has provided for one or more specific subjects of secular instruction according to the table in schedule C.—

(*a*) A grant may be made for every such scholar presented in standards VI., VII., VIII., who passes a satisfactory examination in not more than two of such subjects besides drawing. The grant for a pass in stage 1 shall be Rs. 2 for each subject; in stage 2, Rs. 4 for each subject; in stage 3, Rs. 6 for each subject.

(*b*) Any scholar who has previously passed in standard VIII. may, if qualified by attendance, be presented in not more than three of such specific subjects besides drawing.

CHAPTER IV.

VERNACULAR LITERATURE IN ENGLISH SCHOOLS.

84 English schools in which systematic instruction is given in a vernacular language and literature will be allowed to present scholars for vernacular passes in standards VI., VII., and VIII. of the subjects appointed for vernacular schools.

85. No scholar who has failed in the English part of the examination can be presented for a pass in vernacular literature, the value of which will be the same as in vernacular schools.

APPENDIX.

Schedule A.

UNIVERSITY OF CAMBRIDGE REGULATIONS FOR LOCAL EXAMINATIONS.

The Regulations for the Examinations to be held in December, 1888, will be issued to Managers of Grant-in-aid high schools as soon as received.

Schedule B.

STANDARDS of Examination for English Schools.

	Reading.	Writing.	Arithmetic.	Geography.	History.
Standard I.	A few sentences from a First Book (at least 30 pages) distinctly and accurately pronounced.	To form letters, small and capital, on slate or black-board.	Notation to hundred, addition orally of numbers whose sum does not exceed twenty, and subtraction of digits.		
Standard II.	A few sentences from a Second Book slowly and distinctly read.	To copy in manuscript characters a line of print on slate or black-board, and write from dictation a few common words. Copy-writing (single letters in large text) must be shown in this standard.	Simple addition and subtraction of numbers containing not more than five figures. Multiplication to 3 times 12.		
Standard III.	Clear and intelligible reading from a Third Book.	To write from dictation, words and short sentences from the reading book, slowly read and then dictated. Copy-writing in large round text must be shown in this standard.	The four simple rules. Miscellaneous questions		
Standard IV.	Good and intelligent reading from a Fourth Book. To point out nouns, verbs, and adjectives in passage read.	To write a connected passage from the reading book, slowly read and then dictated. Copy-writing in small round text must be shown in this standard.	Use of rupees and cents, bills of parcels, simple problems.	Definitions. Use of Map of Ceylon.	
Standard V.	Good and intelligent reading from a Fifth Book with particular regard to emphasis. Parsing a simple sentence.	To write about eight lines slowly dictated from the reading book. Copy-writing in a running hand must be shown in this standard.	Reduction of common weights and measures and their application to foregoing rules, and the use of English money.	General description of figure of the Earth. Europe.	Ceylon.
Standard VI.	The same, from any book containing selections from good English authors. Parsing with analysis of a simple sentence.	To write to dictation from any newspaper or book.	Practice, simple and compound proportion.	General description of the ocean. Europe and Asia.	Outline of English History from 1066 to 1485.
Standard VII.	Reading with fluency and expression from any newspaper or book brought by the Inspector. Parsing and analysis of a short complex sentence.	Writing from memory the substance of a short story read out twice; spelling, handwriting, and grammar to be considered.	Vulgar and decimal fractions.	General description of the earth's surface. British Empire.	Same, from 1485 to 1688.
Standard VIII.	The same, with recitation of not less than fifty lines of prose or poetry. Meaning and allusions to be known, and if well-known to at one for deficiency of memory. Parsing and analysis of prose or poetry.	A short theme or letter: the composition, spelling, grammar, and handwriting to be considered.	Interest and discount with exercises on all the foregoing rules.	Physicial and political Geography of the World.	Same, from 1688 to 1815.

1.—Scholars may not be presented a second time for examination under the same standard, unless they fail to pass in more than one of the first three heads. If they fail to pass in more than one of the three first heads they will be considered to have failed altogether, and no result payment can be claimed for them.

2.—Reading may be tested in the ordinary class book, if approved by the Inspector: but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading books. Managers are requested to send a copy of all reading books used, to the Department, with an intimation of the standard for which they are intended.

3.—Copy-writing is to be done on paper in the presence of the Inspector.

Schedule C.

Stage	1 Mathematics.	2 Latin.	3 Mechanics.	4 Animal Physiology.	5 Botany.	6 Drawing.	7 Chemistry.	Physics. 8 Light and Heat.	Physics. 9 Magnetism. Electricity.	10 Sanitation.	11 Agriculture	12 For Girls only. Domestic Economy.	13 Book-keeping.
First	Algebra: notation, addition, subtraction, Euclid, Book I., propositions 1 to 15, inclusive.	Grammar, to the end of regular verbs.	Elementary knowledge of the different states of matter,—solid, liquid, and gaseous,—with illustrations of compressibility, elasticity, and resistence. Measures of space, and time, velocity.	The build of the human body, names and positions of the internal organs.	Characters of the root, stem, leaves, and parts of the flower, illustrated by specimens of common flowering plants	Free-hand drawing from flat examples	Elementary and compound matter, illustrations of combination and decomposition in such bodies as hydrochloric acid, water, oxide of mercury, and rust of iron.	General notions respecting the formation of shadows and the reflection of light, the formation of images by a looking-glass, the three modes in which heat may be conveyed from one place to another, effects of heat, expansion, melting, boiling, and evaporation.	Attraction, repulsion, and polarity as illustrated by the magnet, terrestrial magnetism, and the mariners' compass	Chapters I to V., inclusive, of "The Way to Health" published by the Christian Vernacular Educational Society.	Chapters I. to IV., inclusive, of the Departmental Primer.	Chapters I. to IV. of Keely's Domestic Economy, and general questions.	Double entry
Second	Algebra, to simple equations (inclusive) Euclid, Book I.	Irregular verbs and first rules of Syntax. Knowledge of Delectus or other first Latin reading book. Translation of simple sentences of English (three or four words) into Latin.	Elementary knowledge of force and of the conservation of energy. The parallelogram of forces. General notions of gravitation.	Circulation and respiration, and the broad structure of the organs concerned.	Structure of wood, bark, and pith, cells and vessels. Food of plants, and manner in which a plant grows. Functions of the root, leaves, and different parts of the flower.	Free-hand drawing from models.	Preparation and properties of the common gases, such as oxygen, hydrogen, and nitrogen, and chlorine. The chemical character and constituents of pure air and pure water, and the nature of the impurities sometimes found in both. The air-food of plants.	Refraction of light, appearance of objects under water, separation of white light into its components by a prism explanation of the thermometer. The disappearance of heat in the melting of solids and the boiling of liquids.	Attraction of light bodies by rubbed sealing-wax and glass. Experimental proof that there are two forms of electricity—attraction and repulsion. Gold-leaf electroscope.	Chapters I. to IX., inclusive, of the same book.	Chapters I. to VII., inclusive, of the same book.	Chapters I. to VII. of Keely's Domestic Economy, and general questions.	
Third	Algebra, to quadratic equations (inclusive). Euclid, Books I. and II., Elements of Mensuration.	The Latin Grammar, Cæsar de Bello Gallico, Book I. Somewhat longer sentences to be translated from English into Latin.	Elementary knowledge of the mechanical powers.	The organs and function of alimentation. The properties of muscle and nerve.	The comparison of a fern and a moss with a flowering plant, the formation of different kinds of fruits, the structure of a bean and of a grain of rice, the phenomena of germination.	Perspective. Candidates will be required to show a knowledge of the use of vanishing and measuring points used in horizontal planes, and to represent simple solids or objects on the ground plane in any position.	The properties of carbon as found both in inorganic & organic bodies with elementary knowledge of the constituents of food. Differences between metallic and non-metallic bodies. Combination by weight and volume. The use of symbols and chemical formulæ.	Rudimentary explanation of the Camera obscura, burning glass, magnifying glass, microscope, and telescope. Illustration of the difference of the specific heat of bodies. The causes of cloud, rain, and dew.	Construction of electrophorus electrical machine, and Leyden jar; construction of a common battery, explanation of a thunder-storm. Action of a current on the magnet.	The whole book.	The whole book, with questions from any Standard work.	The whole of Keely's Domestic Economy, and general questions.	

Schedule D.

STANDARDS of Examination for Anglo-Vernacular Schools.

		Reading.*	Writing.*	Arithmetic.*	Geography.*	History.*	English Reading.	English Writing.
PRIMARY.	Standard I.	A few sentences from a First Book distinctly and accurately pronounced.	To form letters on slate or Black-board.	Notation up to 999. Addition up to 20, and subtraction of digits.				
	Standard II.	A few sentences from a Second Book slowly and distinctly read.	To write to dictation short sentences out of the reading book. Copy-writing to be shown, large hand only.	Simple addition and subtraction of numbers of not more than four figures Multiplication table to 3 times 12.				
	Standard III.	Clear and intelligible reading from a Third Book.	To write a connected passage from the reading book, containing two or three sentences. Copy-writing to be shown, large hand only.	Multiplication and division, with miscellaneous questions in the four rules.				
	Standard IV.	Good and intelligent reading from a Fourth Book.	Dictation from reading book. Round hand copy-writing.	Use of rupees and cents, bills of parcels, simple problems.	Definitions and Ceylon?			
	Standard V.	Good and intelligent reading with questions to show comprehension of sentences read (Fourth Book.)	Dictation from reading book. Small hand copy-writing.	Reduction of common weights and measures, and their application to foregoing rules.	Same, with outlines of the World.	...	A few sentences from a First Book containing at least 30 pages, distinctly pronounced, and translated into vernacular.	Dictation from reading book —single words.
MIDDLE.	Stantard VI.	Good fluent reading with explanation from a classical work in prose.	Writing from memory the substance of a short narrative read out twice. Spelling, handwriting, and grammar to be considered.	Simple and compound proportion. Use of English money.	Asia.	...	A few sentences from a Second Reading book distinctly read and translated into vernacular.	Dictation from reading book, short sentences.
	Standard VII.	The same, with addition of verse.	A short theme or letter.	Vulgar and Decimal Fractions.	Asia & Europe	Ceylon outlines of principal periods.	Clear and intelligent reading with translation into vernacular.	To write a translation from any vernacular book approved by the Department.
	Standard VIII.	Explanation of passage from a classical work, such as Ummagga-jâtaka.	An essay in composition.	Interest, simple and compound, and discount, with exercises on all the foregoing rules.	The World.	Ceylon.	The same, advanced proficiency.	Same, advanced proficiency.

1.—Reading may be tested in the ordinary class book, if approved by the Inspector: but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading books. Managers are requested to send a copy of all reading books used, to the Department, with an intimation of the standard for which they are intended.

2.—Copy-writing is to be done on paper in the presence of the Inspector.

3.—In Anglo-vernacular schools passes for Vernacular Grammar of the same value as other passes will be allowed, the subjects for Sinhalese schools being:—*Standard VI.*—Warnaritiya, pp. 29—46, or equivalent portions of the Sinhalese Grammars of Rev. S. Coles or Mr. Johannes. *Standard VII.*—Warnaritiya, pp. 25—54. *Standard VIII.*—The general application of grammatical rules to classical literature. In Tamil schools an equivalent will be accepted in any approved grammar.

4.—Under the head of "Reading" the following alternative subjects will be accepted. *Standard VI.*—To read at sight, with comprehension, a passage from a vernacular newspaper, public notice, school manual, or other book or document in correct modern vernacular, selected by the examiners. *Standard VII.*—Good fluent reading at sight, with comprehension, of a fairly-written letter or manuscript in correct modern vernacular. *Standard VIII.*—Reading a letter or document written in ordinary current vernacular handwriting.

* Vernacular.

Schedule E.

STANDARDS of Examination for Vernacular Schools.

		Reading.	Writing.	Arithmetic.	Geography.	History.
PRIMARY.	Standard I.	A few sentences from a First Book distinctly and accurately pronounced.	To form letters on slate or black-board.	Notation up to 999. Addition up to 20, and subtraction of digits.		
	Standard II.	A few sentences from a Second Reading Book slowly and distinctly read	To write to dictation short sentences out of the Reading Book. Copy-writing to be shown, large hand only.	Simple addition and subtraction of numbers of not more than four figures. Multiplication table to 3 times 12.		
	Standard III.	Clear and intelligible reading from a Third Book.	To write a connected passage from the Reading Book containing two or three sentences. Copy-writing to be shown, large hand only.	Multiplication and division, with miscellaneous questions in the four rules.		
	Standard IV.	Good and intelligent reading from a Fourth Book.	Dictation from Reading Book. Round hand copy-writing.	Use of rupees and cents, bills of parcels, simple problems.	Definitions and Ceylon.	
	Standard V.	Good and intelligent reading with questions to show comprehension of sentences read (Fourth Book).	Dictation from Reading Book. Small hand copy-writing.	Reduction of common weights and measures and their application to foregoing rules.	Same, with outlines of the World.	
MIDDLE.	Standard VI.	Good fluent reading, with explanation from a classical work in prose.	Writing from memory the substance of a short narrative read out twice. Spelling, handwriting, and grammar to be considered.	Simple and compound proportion. Use of English money.	Asia.	
	Standard VII.	The same, with addition of verse.	A short theme or letter.	Vulgar and Decimal Fractions.	Asia and Europe.	Ceylon, outline of principal periods.
	Standard VIII.	Explanation of a passage from a classical work, such as Ummagga-játaka.	An essay in composition.	Interest, simple and compound, and discount, with exercises on all the foregoing rules.	The World.	Ceylon.

1.—Reading may be tested in the ordinary class book, if approved by the Inspector; but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading books. Managers are requested to send a copy of all reading books used, to the Department, with an intimation of the standard for which they are intended.

2.—Copy-writing is to be done on paper in the presence of the Inspector.

3.—In Middle Vernacular schools passes for grammar will be allowed of the same value as other passes, the subjects for Siṇhalese schools being:—*Standard VI.*—Warnaritiya, pp. 29—46, or equivalent portions of the Siṇhalese Grammar of Rev. S. Coles or Mr. Johannes. *Standard VII.*—Warnaratiya, pp. 25—54, or equivalent portions of the Siṇhalese Grammars of Rev. S. Coles or Mr. Johannes. *Standard VIII.*—The general application of grammatical rules to classical literature. In Tamil schools an equivalent will be accepted in any approved grammar.

4.—Under the head of "Reading" the following alternative subjects will be accepted:—*Standard VI.*—To read at sight, with comprehension, a passage from a vernacular newspaper, public notice, school manual, or other book or document in correct modern vernacular, selected by the examiners. *Standard VII.*—Good fluent reading at sight, with comprehension, of a fairly-written letter or manuscript in correct modern vernacular. *Standard VIII.*—Reading a letter or document written in ordinary current vernacular handwriting.

Schedule F.

VALUE of Passes, English Schools.

	Reading.	Writing.	Arithmetic.	Geography.	History.	TOTAL.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Standard I. ...	1 50	1 50	1 50	—	—	4 50
do. II. ..	1 50	1 50	1 50	—	—	4 50
do. III. .	2 0	2 0	2 0	—	—	6 0
do. IV. ...	2 0	2 0	2 0	2 0	—	8 0
do. V. ...	2 0	2 0	2 0	2 0	2 0	10 0
do. VI. ...	2 50	2 50	2 50	2 50	2 50	12 50
do. VII. ...	2 50	2 50	2 50	2 50	2 50	12 50
do. VIII. ...	2 50	2 50	2 50	2 50	2 50	12 50

In girls' schools a pass in "work" is of the same value as a pass under other heads.

Schedule G.

VALUE of Passes, Vernacular and Anglo-Vernacular Schools.

	Reading.	Writing.	Arithmetic.	Geography.	Grammar	History.	VERNACULAR. Total.	ANGLO-VERNACULAR English Reading.	English Writing.	Total
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c
Standard I. ...	1 50	1 50	1 50	—		—	4 50	—	—	—
do. II. ...	1 50	1 50	1 50	—	—	—	4 50	—	—	—
do. III. ...	2 0	2 0	2 0	—	—	—	6 0	—	—	—
do. IV. ..	2 0	2 0	2 0	2 0	—	—	8 0	—	—	—
do. V. ...	2 0	2 0	2 0	2 0	—	—	8 0	2 0	2 0	12 0
do. VI ...	2 50	2 50	2 50	2 50	2 50	—	12 50	2 50	2 50	17 50
do. VII. ...	2 50	2 50	2 50	2 50	2 50	2 50	15 0	2 50	2 50	20 0
do. VIII. ...	2 50	2 50	2 50	2 50	2 50	2 50	15 0	2 50	2 50	20 0

In girls' vernacular and Anglo-vernacular boarding schools the value of each pass is double the above sums.
In all girls' schools a pass in "work" will be of the same value as a pass under other heads.
In C. schools the value of a pass is the same as the value of a pass in the corresponding standards of A schools.

Schedule H.

Form of Certificate from Managers to be forwarded to Director of Public Instruction, on registration of Pupil Teachers.

SIR,—I HAVE the honour to inform you that I have this day nominated A. B. as pupil-teacher in the school, believing ( ) to be well qualified for the office in respect of health, character, habits, and parentage.

I further certify that ( ) passed the standard in Reading, Writing, Arithmetic, and at the examination of school on day of 188 .

I am, &c.,
M. N.,
Manager.

Registered this day of , 188 . No.

Director of Public Instruction.

(On the reverse)

PUPIL TEACHER'S CERTIFICATE.

First Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Second Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Third Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Note.—After the third examination this certificate is to be exchanged for a provisional teacher's certificate.

Schedule I.

QUALIFICATIONS and Certificates required of Pupil Teachers in Grant-in-aid English schools. The conditions of registration are stated in the Code.

	General Subjects of Examination.	Additional Subjects	School Management.	Certificates of Manager and Inspector.
First year	All subjects assigned to VIth standard	Elementary composition. Map drawing, Ceylon	To give a reading lesson to any class not higher than IVth standard	According to Form.
Second year	All subjects assigned to VIIth standard	Same, map drawing, Asia	To give a lesson in reading, writing, or arithmetic to any primary class	Same.
Third year ...	All subjects assigned to VIIIth standard	Same, map drawing, World	Increased skill in teaching any primary school in all standards. Written examination on duties of monitors	Same.

Schedule J.

QUALIFICATIONS and Certificates required of Pupil Teachers in Grant-in-aid Vernacular and Anglo-Vernacular schools. The conditions of registration are stated in the Code.

	General Subjects of Examination	Additional Subjects.	School Management.	Certificates of Manager and Inspector.
First year ...	All subjects assigned to VIth standard	Elementary composition. Map drawing (outlines of Ceylon and principal towns.)	To give a reading lesson to any class not higher than IVth standard	According to Form.
Second year ...	All subjects assigned to VIIth standard	Same, more advanced, Ceylon in detail.	To give a lesson in reading, writing, and arithmetic to any primary class	Same.
Third year ...	All subjects assigned to VIIIth standard	Same, more advanced, outlines of geography of the World.	The same, with a lesson in geography. Written examination on all the duties of monitors	Same.

Pupil-teachers in Vernacular schools will be examined in the standards of vernacular schools only. Pupil-teachers in Anglo-vernacular schools in the standard of Anglo-vernacular schools.

Schedule K.

School 188

I hereby certify that has fulfilled the duties required of him with punctuality, diligence, obedience, and intelligence, and that to the best of my knowledge and belief his moral character has been uniformly good.

Manager.

Schedule L.

QUALIFICATIONS and Certificates of Students in Grant-in-Aid Training Schools.

	Certificate.	Reading.	Writing.	Arithmetic.	Geography.	History.	School Management.
For Admission.	Certificate of Manager.	Reading with fluency and expression from a classical book with grammatical analysis.	An essay in composition.	As for VIIIth Standard.	The World.	Ceylon.	Duties of Monitors.
First year's Examination.	Same.	Same, with advanced proficiency.	Same	Same, more difficult examples	Distribution of land and water on the earth's surface, advanced proficiency in political geography of the World.	Same, with outlines of the great events of the history of the World.	To give lessons in reading, writing, or arithmetic to a VIth standard class. Written papers on school management.
Second year's Examination.	Same.	Same, with advanced proficiency.	Same.	Same.	Advanced proficiency in physical and political geography of the World	Same, advanced proficiency.	To teach a VIIth standard class. Written papers on school management and method.

NOTE.—Candidates for Anglo-vernacular certificates will be required to pass, for admission, in the English subjects required for the VIIIth standard in Anglo-vernacular schools and in the subsequent examinations will be required to teach in the first year, a VIth standard class in English, and, in the second year, a VIIth standard class to the satisfaction of the Inspector.

Schedule M.

The names of the children to be examined in each standard must be entered upon a form prepared for the purpose, termed a Report Slip; each Report Slip bearing the following declaration and particulars to be signed by the manager of the school, and handed to the Inspector previously to the examination:—

I hereby certify and declare that all the children whose names are herein entered to be examined for a grant have received not less than nine months' actual instruction in this school during the twelve months immediately preceding the date thereof; and that the conditions laid down with respect to the standard in which they are now offered for examination have been strictly complied with, and that, to the best of my knowledge and belief, no one of them has passed the examination in this or in a higher standard, in this or in any other school.

I further certify that they have all been vaccinated, or are protected from small-pox by having had that disease.

Number on List.

Average attendance for twelve months preceding the examination.

A. B. Manager.

SPECIMEN REPORT SLIP.

Admission Number	Number	Name.	Age last Birthday.	Date of admission to school.	Number of attendances since last examination.	Under what standard last examined.	Reading.	Writing.	Arithmetic.	Geography.	Grammar.	History.	Needlework.
				D. M Y.									

Schedule N.

ENGLISH SCHOOLS.

Complete High School:
- High School .. Senior Local Examination; Junior Local Examination; Examination in specific subjects, Schedule C
- Middle School.. VIII. Standard; VII. do.; VI. do.
- Primary School V do.; IV. do.; III. do.; II. do.; I. do.

Complete Middle School:
- Middle School ... VIII Standard; VII. do.; VI. do.
- Primary School V. do.; IV. do.; III. do.; II. do.; I. do.

VERNACULAR SCHOOLS.

High School. ... Classical Sinhalese or Tamil Literature.

Vernacular Middle Schools in which English is taught in standards V., VI., VII., and VIII., are called Anglo-vernacular schools.

NOTE.—The following are the Rules for keeping Registers referred to in clause 20 *(d)*.

The Registers of Admission and Attendance must always be kept in the School during school hours.

ATTENDANCE REGISTERS.

The names of scholars must be entered in the Register of Daily Attendance according to Standards, preserving the same order throughout the year.

An attendance, to fulfil the conditions of the Revised Code, must be an attendance of not less three hours.

In schools which have two sessions, morning and evening, two half attendances of one hour and a-half shall constitute a full attendance.

The registers must be marked immediately after the first lesson of the session, and finally closed (*i. e.*, the column must be filled up with the marks indicating presence or absence, as given below,) at least three hours before the close of each meeting of the school, or at least one hour and a-half before the close of each session in schools which have two daily sessions.

After the registers are closed no child may be marked.

Every child must be marked at each meeting of the school.

In ink, never in pencil inked over afterwards.

Presence must be marked with a long stroke, thus \ or /.

Absence must be marked with an O.

There must be no dots.

No erasures; if any error has been made, it must be corrected in the column for remarks opposite the child's name.

No blanks.

If a child leaves before the expiration of the three hours' attendance (or one hour and a-half in case of two session schools), its mark for presence must be cancelled by another stroke: thus +

Registers must be original and not copied from slates, papers, olas, &c., on pretence of keeping them clean or any other plea.

The number of attendances made by each class or standard must be entered at the foot of the column before the teacher leaves the school, and the grand total must be entered at the same time.

On the occasion of a holiday, a line should be drawn down the whole length of the column for the day.

At the end of each month the summary (which will be found at the end of this book) must be filled up, showing (1) the number of school-days during the month (or number of sessions in schools holding two daily sessions); (2) the total number of attendances; (3) the average attendance for the month.

NOTE.—The average attendance is shown by dividing the total number of attendances by the number of school-days (or school sessions).

ADMISSION REGISTER.

When a scholar is admitted, his name must be entered at once in the Admission Register, and the necessary information entered in each column.

Should any doubt or difficulty arise with reference to the Standard in which a child admitted from another school was last examined, the Inspector should be informed accordingly.

When a child has been absent for four months, his name should be struck off the roll, and an entry at once made in the Register in the column headed "Date of Withdrawal." If this is regularly done, the number of children in attendance according to the Admission Register will tally with the number given in the Daily Attendance Register. If a scholar whose name has been struck off the Register is re-admitted, his original number should again be assigned to him.

NOTIFICATIONS OF AMENDMENTS.

AMENDMENTS PROPOSED FOR THE CODE FOR AIDED SCHOOLS, 1888.

THE following Amended Articles for the Revised Code of 1888 are published for general information in the *Government Gazette* of October 28, 1888, and are incorporated in the Code:—

CODE FOR 1887.	AMENDMENTS FOR 1888.
20 Before any grant is made to a school the Department must be satisfied that— (*a*) (*b*) (*c*) The girls in a girls' school are taught plain needle work as part of the ordinary course of instruction.	20. (*c*) After "instruction" add the words "and that the head teacher is a female."
50. After the 1st day of January 1888, no grant will be continued to any vernacular or Anglo-vernacular boys' school which is not in charge of a teacher holding a certificate or license of the Department.	50. After the 1st day of January 1888, no grant will be continued to any vernacular or Anglo-vernacular boys' school which is not in charge of a teacher holding a certificate or license of the Department, in terms of the foregoing clauses; that is to say, a vernacular primary boys' school to earn a grant must be taught by a head teacher holding a 3rd class certificate or a 2nd class license, and a vernacular middle boys' school must be taught by a head teacher holding a 2nd class certificate or a 1st class license, while an Anglo-vernacular boys' school must be taught by a head teacher holding an Anglo-vernacular certificate or license. Provided always that in the case of schools in backward or remote districts special circumstances may be submitted, and the Governor may dispense with the required certificate or license.
83. If the time-table of an English school in use throughout the year has provided for one or more specific subjects of secular instruction according to the table in schedule C— (*a*) A grant may be made for every such scholar presented in standards VI., VII., VIII., who passes a satisfactory examination in not more than two of such subjects besides drawing. The grant for a pass in stage 1 shall be Rs. 2 for each subject; in stage 2, Rs. 4 for each subject; in stage 3, Rs. 6 for each subject.	83. If the time-table of a school in use throughout the year has provided for one or more specific subjects of secular instruction according to the table in schedule C— (*a*) A grant may be made for every such scholar presented in the standards VI., VII., VIII., who passes a satisfactory examination in not more than two of such subjects besides drawing. The grant for a pass in stage 1 shall be Rs. 2 for each subject; in stage 2, Rs. 4 for each subject; in stage 3, Rs. 6 for each subject.

Schedule C.

Stage	1 Mathematics.	2 Latin.	3 Mechanics.	4 Animal Physiology.	5 Botany.	6 Drawing.	7 Chemistry.	Physics. 8 Light and Heat.	Physics. 9 Magnetism. Electricity	10 Sanitation.	11 Agriculture.
First	Algebra: notation, addition, subtraction, Euclid, Book I., propositions 1 to 15, inclusive.	Grammar, to the end of regular verbs.	Elementary knowledge of the different states of matter,—solid, liquid, and gaseous,—with illustrations of compressibility, elasticity, and resistence. Measures of space, and time, velocity.	The build of the human body. names and positions of the internal organs.	Characters of the root, stem, leaves, and parts of the flower, illustrated by specimens of common flowering plants.	Free-hand drawing from flat examples	Elementary and compound matter, illustrations of combination and decomposition in such bodies as hydrochloric acid, water, oxide of mercury, and rust of iron	General notions respecting the formation of shadows and the reflection of light, the formation of images by a looking-glass, the three modes in which heat may be conveyed from one place to another, effects of heat, expansion, melting, boiling, and evaporation.	Attraction, repulsion, and polarity as illustrated by the magnet, terrestrial magnetism, and the mariners' compass.	Chapters I. to V., inclusive, of "The Way to Health" published by the Christian Vernacular Educational Society.	Chapters I. to IV., inclusive, of the Departmental Primer.
Second	Algebra, to simple equations (inclusive). Euclid, Book I.	Irregular verbs and first rules of Syntax. Knowledge of Delectus or other first Latin reading book. Translation of simple sentences of English (three or four words) into Latin.	Elementary knowledge of force and of the conservation of energy. The parallelogram of forces. General notions of gravitation.	Circulation and respiration, and the broad structure of the organs concerned.	Structure of wood, bark, and pith, cells and vessels. Food of plants, and manner in which a plant grows. Functions of the root, leaves, and different parts of the flower.	Free-hand drawing from models.	Preparation and properties of the common gases, such as oxygen, hydrogen, and nitrogen, and chlorine. The chemical character and constituents of pure air and pure water, and the nature of the impurities sometimes found in both. The air-food of plants.	Refraction of light, appearance of objects under water, separation of white light into its components by a prism explanation of the thermometer. The disappearance of heat in the melting of solids and the boiling of liquids.	Attraction of light bodies by rubbed sealing-wax and glass. Experimental proof that there are two forms of electricity—attraction and repulsion. Gold-leaf electroscope.	Chapters I. to IX., inclusive, of the same book.	Chapters I. to VII., inclusive, of the same book.
Third	Algebra, to quadratic equations (inclusive). Euclid, Books I. and II., Elements of Mensuration.	The Latin Grammar, Cæsar de Bello Gallico, Book I. Somewhat longer sentences to be translated from English into Latin.	Elementary knowledge of the mechanical powers.	The organs and function of alimentation. The properties of muscle and nerve.	The comparison of a fern and a moss with a flowering plant, the formation of different kinds of fruits, the structure of a bean and of a grain of rice, the phenomena of germination.	Perspective Candidates will be required to show a knowledge of the use of vanishing and measuring points used in horizontal planes, and to represent simple solids or objects on the ground plane in any position.	The properties of carbon as found both in inorganic & organic bodies, with elementary knowledge of the constituents of food. Differences between metallic and non-metallic bodies. Combination by weight and volume. The use of symbols and chemical formulæ	Rudimentary explanation of the Camera obscura, burning glass, magnifying glass, microscope, and telescope. Illustration of the difference of the specific heat of bodies. The causes of cloud, rain, and dew.	Construction of electrophorus electrical machine, and Leyden jar; construction of a common battery, explanation of a thunder-storm. Action of a current on the magnet.	The whole book.	The whole book, with questions from any Standard work

Schedule C.

Add the following subjects:—

Book-keeping:—

Stage I.—Double Entry.

Domestic Economy (for girls only):—

Stage I.—Chapters I. to IV. of Keely's Domestic Economy, and general questions.

Stage II.—Chapters I. to VII. of Keely's Domestic Economy, and general questions.

Stage III.—The whole of Keely's Domestic Economy, and general questions.

Office of the Director of Public Instruction,
Colombo, September 20, 1887.

H. W. GREEN,
Director.

APPENDIX II.

INSTRUCTIONS TO INSPECTORS, AS PUBLISHED IN THE *GOVERNMENT GAZETTE* OF NOVEMBER 7 AND 14, 1884.

Circular to Inspectors.—No. 13.

SIR,—I HAVE the honour to inform you that, being much impressed with the bad English taught in certain English schools under native teachers, I addressed the Government on the subject, proposing that no English school should, after a certain period, be accepted for a grant-in-aid, unless the principal teacher held a certificate of competency to teach English.

2. The Government, however, has decided that until the consent of the managers of schools to the compulsory employment of certificated teachers has been more clearly ascertained, it is desirable not to enforce a system of certificates, and that the present system of judging only by results should be maintained; but it is added: "The examination of the schools should be carefully conducted, and the standards prescribed strictly enforced, and if the result be, as may be anticipated, to diminish the grants earned, the managers will then doubtless consult their own interest by employing a better class of teachers than they generally do at present."

3. It is therefore to be understood by you that, in the *vivâ voce* portions of examinations of English schools, you will adhere strictly to the standards laid down, and that a weak English school in a small town or village is not to be any more leniently examined than an efficient High school in a central town.

4. As regards paper work, in standards above the 5th, the examination should be conducted as far as possible on paper, and, in order to secure uniformity of examination throughout the Island, complete sets of questions will be prepared in this office, and transmitted to you every month.

5. You will therefore be good enough to send in to me at once a special list showing the dates of examination of each of the Grant-in-aid English schools in your district during next year, so that the papers above referred to may be prepared by me in time.

I am, &c.,
H. W. GREEN,
Director.

Circular to Inspectors.—No. 14.

SIR,—A CASE has been been brought to my notice where some boys who had previously been examined in the 1st and 2nd standards of Arithmetic and Geography in a Vernacular school, were again presented in the same subjects and in the same standards in the English school.

2. It is against the whole spirit of clause 31*c* of the Revised Code that a child should earn a grant twice in the same standard and in the same subject.

3. In the case in point it was urged that these subjects being taught in different languages were different subjects, but Arithmetic and Geography are the same subjects in whatever language taught, and no marks are awarded for proficiency in the language in these subjects, but correctly worked Arithmetic and correct answers to Geographical question, are all that is required. The knowledge of a language is tested and marked for under other heads.

4. You will therefore be so good as to see that no child is examined twice in the subjects of Arithmetic and Geography in the same standards by reason of a transfer from a Vernacular to an English school, or from an English to a Vernacular school.

I am, &c.,
H. W. GREEN,
Director.

XI.—1887.

TREASURE TROVE BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance relating to Treasure Trove."

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

EXTRACT from the Minutes of the Legislative Council, dated October 12, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance relating to Treasure Trove":—

The Hon. S. GRENIER, Attorney-General
The Hon. G. T. M. O'BRIEN, Treasurer
The Hon. P. RÁMA-NATHAN, } Unofficial Members
The Hon. A. L. DE ALWIS, }

TREASURE TROVE BILL.

THE Sub-Committee appointed to consider the Bill relating to Treasure Trove have the honour to report as follows :—

2. In clause 3, the Committee are of opinion (1) that the duty of reporting the finding of treasure trove and of surrendering the same should be restricted to the actual finder and possessor thereof, and should not be extended to every person to whom the mere knowledge of the finding might in any way come; (2) that the rank of the "headman" therein referred to should be defined in the interpretation clause under the term "chief headman"; and (3) that the police officer to whom information is required to be given should not be one under the rank of sergeant.

3. In clause 6, the Committee recommend that every person who conforms to the requirements of clause 3, and who voluntarily surrenders treasure trove, be declared entitled to a pecuniary reward, not being less than one-half of the value of such treasure trove, the value in each case being left to be determined by the Governor in Executive Council. They also recommend, with the view of encouraging persons to give prompt information, that provision be made for the payment of the above-mentioned reward to the informer where the finder or possessor fails to surrender treasure trove.

4. Clause 7 should be made to consist with clause 3, and the penalty for concealment should not exceed the maximum punishment which District Courts have the power to inflict.

5. The Committee send herewith a copy of the Bill showing the amendments which would be necessary if their views were adopted by the Legislative Council.

G. T. M. O'BRIEN.
S. GRENIER.
P. RAMA-NATHAN.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, November 2, 1887.

XII.—1887.

THE ARRACK, RUM, AND TODDY AMENDMENT BILL.

REPORT of a Sub-Committee of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)."

Ordered by the Legislative Council to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

EXTRACT from the Minutes of the Legislative Council, dated October 19, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend the Ordinance No. 10 of 1844 (Arrack, Rum, and Toddy)":—

The Hon. S. GRENIER, Attorney-General.
The Hon. F. R. SAUNDERS, C.M.G., Government Agent Western Province.
The Hon. P. RAMA-NATHAN, } Unofficial Members.
The Hon. H. BOIS, }

ARRACK, RUM, AND TODDY AMENDMENT BILL.

THE Sub-Committee appointed to consider a Bill for amending the Arrack, Rum, and Toddy Ordinance, No. 10 of 1844, have the honour to report as follows :—

2. In view of the necessity for obtaining accurate information as to the quantity of arrack manufactured in and distributed throughout the Island, they recommend (1) that, as regards distillers, the standard form C 24, with the modifications indicated in the copy annexed, be re-issued ; and (2) that, as regards wholesale dealers, the form B annexed, with the alterations indicated, be re-issued, authority being given to the Government Agent or his Assistant to require the parties concerned to furnish the returns weekly. Both of the above-mentioned forms appear to have been in use at one time, but when or why they were discontinued the Committee are not aware.

3. A doubt exists as to whether section 22 of Ordinance No. 10 of 1844 gives the Government Agent the same powers in and over the stores of distillers of arrack (who as such are wholesale dealers) as he has over the stores of wholesale dealers licensed under section 18 In the opinion of the Committee these powers should be possessed by the Government Agent in respect of all arrack stores, and they recommend that a clause be added to the Bill now under consideration to effect that purpose.

S. GRENIER.
F. R. SAUNDERS.
P. RAMA-NATHAN.
H. BOIS.

Legislative Council Chamber,
Colombo, November 2, 1887.

XIII.—1887.

STATEMENTS

OF

THE REVENUE AND EXPENDITURE

OF THE SEVERAL

PROVINCIAL ROAD COMMITTEES DURING THE YEAR 1886.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

STATEMENT OF RECEIPTS AND PAYMENTS UNDER THE ROAD ORDINANCE, FOR 1886.

EASTERN PROVINCE.

RECEIPTS

	In Money.		In Labour.		Total.	
	R.	c.	R.	c.	R	c.
Batticaloa.						
Balance on January 1, 1886	6,391	33				
Collected arrears in 1886	1,860	0				
					8,251	33
Unexpended balance on Estimates for 1885	–				618	35
Recovered Commutation for 1886.						
Eravur and Koralai Pattus	4,504	50	304	50		
Manmunai East	6,153	0	225	0		
Manmunai West	2,656	50	168	0		
Eruvil and Porativu	2,757	0	360	0		
Karaivaku North	2,694	0	400	50		
Karaivaku South	2,659	50	205	50		
Chammanturai and Nadukadu	1,482	0	196	50		
Nintavur	894	0	–			
Nadukadu and Natanai Vannams	198	0	—			
Akkarai Pattu	2,166	0	592	50		
Akkarai Pattu Vannam	172	50	12	0		
Panowa	499	50				
Bintenna	537	0	193	50		
Recovered by the District Engineer, Public Works Department ...	1,225	50	—			
Value of labour supplied to the Director of Public Works ...	348	0	—			
	28,947	0	2,658	0	31,605	0
Resthouse collections	770	39½				
Miscellaneous receipts	87	38½				
Government contribution on account of Resthouse Keepers' salaries	460	0				
Value of lost articles	3	75				
Value of condemned articles	14	89½				
Fine imposed	1	50				
			.		1,337	92½
Trincomalee.						
Balance on December 31, 1885	—		—		503	43
Recovered arrears of 1885	229	50				
Do. previous years	107	25				
Resthouse collections	687	50				
			—		1,024	31
Recovered Commutation for 1886.						
Trincomalee Gravets, Divisions Nos. 11 and 12 ...	168	0	1	50		
Tampalakam and Kanthalai, Tampalakam Pattu .	375	0	3	0		
Kiniyai and Kudakkeri	991	50	1	50		
Koddiyar Pattu	1,294	50	40	50		
Kaddukulam Pattu, Tamil villages	850	50	15	0		
Do. Sinhalese villages	312	0	13	50		
	3,991	50	75	0	4,066	50
Carried over ...	—		—		45,406	87

RECEIPTS—*contd.*

	In Money.		In Labour.		Total.	
	R.	c.	R.	c.	R.	c.
Brought forward ...	—		—		45,406	87
Miscellaneous						
Proceeds sale of the condemned tools ...	7	23				
Government contribution in aid of Resthouse Keepers' salaries ...	440	0				
Amount from the Chairman Provincial Road Committee, Batticaloa, on account of additional buildings to the Resthouse at Ichchilampattai	60	21				
Amount from the Assistant Government Agent being unpaid wages of the District Road Committee coolies	17	94				
Advance out of Resthouse collections ...	137	0				
			—		662	36
Total ...	—		—		46,069	23

EXPENDITURE.

	In Money.		In Labour.		Total.	
BATTICALOA	R.	c	R.	c.	R	c.
Pay of Establishment ...	1,404	96				
Pay of Resthouse Keepers ...	2,374	50				
			—		3,779	46
Upkeep of ferries ...	—		—		384	0
Office contingencies ...	—		—		844	17
Refund of Commutation improperly recovered ...			—		51	0
Percentage to Division Officers ...	—		—		2,686	17
Commission to Collectors ...	—		—		738	46½
Purchase of materials	—		—		225	83
Purchase and repair of boats ...	—		—		224	66½
Cost of tools ...	—		—		979	46½
Repair of ferry sheds ...	—		—		44	87½
Principal roads ...	—		—		11,221	45
Resthouses ...	—		—		3,636	0
For surveying and tracing roads ...	—		—		86	35
For cost of building a protecting wall to one of the streams at Kalladai	—		—		44	78
Pay of Superintendent of Minor Roads, Batticaloa North ...	—		—		1,440	0
Do. do. Batticaloa South ...	—		—		897	50
For erecting a Resthouse and out-houses at Pottuvil ...	—		—		734	6
For value of provisions supplied to Defaulters ...	—		—		413	79
For furnishing Resthouses ...	141	17				
For cost of repairing the drains at Senkalladi Resthouse ...	43	82				
For rattaning furniture ...	25	36				
For transport of furniture to Resthouses ...	51	0				
For thatching the out-houses at Karunkodditivu Resthouse ...	4	78				
			—		266	17
Minor Works.						
Town roads ...	1,136	83	—			
Koddamunai Lakeshore-road ...	41	10	—			
For reconstruction of Kochchikaitivu ...	237	63½	—			
Road from Kurinjamunai to Natanai ...	410	60	96	0		
Do. Arapaddai to Paddipolla ...	1,701	26	225	0		
Do. Ampilanturai to Pulukanawa ...	149	89½	—			
Do. Kommaturai to the sea ...	159	48	22	50		
Do. Eraur to Punnakuda ...	2,341	27	154	50		
Do. Maha-oya to Umunai ...	78	78	193	50		
Do. Murakoddanchenai to the sea ...	7	50	—			
Do. Sinampaddi to Mullikulam ...	521	12½	592	50		
Do Paravenkudi to Ulattukadu ...	305	38½	—			
Do. Vavunattivu to Thumpalancholai ...	145	51	—			
Do. Urpavenkovil to Urani ...	58	30	72	0		
Do. Main-road to Sitandi village ...	352	30	127	50		
Do. Sangamarudue village to the sea ...	217	37½	—			
Do. Verramunai to Malwatta ...	99	59	—			
Kaluvanjikudi-road ...	99	37½	—			
Bailey-road ...	21	96	—			
For erecting a foot-bridge over Monkelaar ...	36	17½	—			
Carried over ...	8,121	48	1,483	50	28,708	20

EXPENDITURE—*contd.*

	In Money.		In Labour.		Total.	
	R.	c	R	c	R	c
Brought forward ...	8,121	48	1,483	50	28,708	20
For tracing a road from the 10th mile-post on the old Badulla road to Pulukanawa tank	97	50	—			
Road from Sammanturai to Natanai	1,183	4	1,162	50		
For repair of a platform bridge near the iron bridge at Karativu ..	10	0	—			
Road from the main road to Paddiruppu ..	99	50	—			
Akkaraipattu Vanam road	—		12	0		
	9,511	52	2,658	0	12,169	52
TRINCOMALEE.						
Office Establishment	749	50				
Commission to Division Officers	401	89½				
Office contingencies	81	69				
			—		1,233	6
Principal Works.						
For upkeep of road from Trincomalee to Kittiluttu ..	625	0				
Do. Coast-road	500	0				
For repair of Resthouses	994	50				
For furnishing Resthouses... .	82	58				
Salaries of Resthouse Keepers	930	0				
Erecting additional buildings to the Resthouse at Ichchilampattai ..	72	52				
Advance made on account of District Road Committee Establishment out of Resthouse collections ...	137	0				
			—		3,341	59
Minor Works						
Salary of Superintendent of Minor Roads .	240	0	-			
Salaries of ferrymen	94	47	—			
Repair of road around Orr's Hill .	22	4	—			
Do. called Love-lane	1	59	1	50		
Do from 13th mile-post on the Kandy road to Tampalakam	64	5	3	0		
Improvement of road to Kovilkudiruppu ...	150	1	—			
Improvement of road from the Nilaveli-road to Sampeltivu ..	86	79	1	50		
Improvement of road from the 7th mile-post on the Anuradhapura road to a village called Gomarasankadawala	335	26	13	50		
Improvement of road from the Matawachchiya to Kivulakadawa ...	169	63½	15	0		
Do. do. 3rd mile-post at Mutur to Malliyattivu	75	15½	40	50		
Repair of road between Tampalakam and Kuniyay ...	30	0				
Do. from the 4th mile-post on the Nilaveli-road to the Anuradhapura-road	155	48	-			
Do from the 21st mile-post, Anuradhapura-road, to Penikaddumurippu	50	56	—			
Cost of a ferry boat for use at the river Periyanarn ..	37	50	—			
	1,512	55	75	0	1,587	55
Total ...	—		—		47,029	99
Balance { At Batticaloa ...					944	83
Balance { At Trincomalee ...					94	39½
Total ..					48,069	22

F. C. FISHER,
Chairman.

CENTRAL PROVINCE.

REVENUE.

	In Money.		In Labour.		Total.	
	R.	c.	R.	c.	R.	c.
Kandy District.						
Balance brought forward from 1885 of Commutation, Resthouse, and Miscellaneous Funds	—		13,137	58		
By Commutation and Labour of 1886	47,554	50				
Arrears of Commutation and Labour	1,525	75				
Unexpended two-thirds Commission and in deposit awaiting instructions	1,130	34				
			50,210	59		
Resthouses	—		1,317	81		
Miscellaneous receipts	—		12	35		
					64,678	33
Matale District.						
Balance brought forward from 1885 of Commutation, Resthouse, and Miscellaneous Funds	—		5,908	27		
By Commutation and Labour of 1886	19,398	0				
Arrears of Commutation and Labour	42	0				
Unexpended two-thirds Commission and in deposit awaiting instructions	1,379	50				
			20,819	50		
Resthouses	—		933	50		
Miscellaneous Receipts	—		98	41		
					27,759	68
Nuwara Eliya District						
Balance brought forward from 1885 of Commutation, Resthouse, and Miscellaneous Funds	—		15,213	28		
By Commutation and Labour of 1886	14,949	0				
Arrears of Commutation and Labour	845	75				
			15,794	75		
					31,008	3
Total ...	—		—		123,446	4

EXPENDITURE.

	In Labour.		Total.	
	R.	c.	R.	c.
Kandy District				
Principal roads and canals	13,447	75		
Minor roads and canals	16,654	98		
Charges, pay of Establishment, Commission to Division Officers, &c. ...	18,814	74		
Pay of Resthouse Keepers	1,466	50		
Miscellaneous payments	138	80		
			50,522	77
Matale District.				
Principal roads and canals	6,863	0		
Minor roads and canals	8,037	84		
Charges, pay of Establishment, Commission to Division Officers, &c. ...	6,618	77		
Pay of Resthouse Keepers	690	0		
Miscellaneous payments	151	41		
			22,361	2
Nuwara Eliya District.				
Principal roads and canals	4,039	25		
Minor roads and canals	6,122	57		
Charges, pay of Establishment, Commission to Division Officers, &c. ...	4,444	26		
Miscellaneous payments	316	36		
			14,922	44
Balance on December 31, 1886, from Commutation, Resthouse, and Miscellaneous Funds :—				
Kandy District	14,155	56		
Mátalé do.	5,398	66		
Nuwara Eliya District ...	16,085	59	35,639	81
Total ...	—		123,446	4

A. M. ASHMORE,
for Chairman.

NORTH-WESTERN PROVINCE.

KURUNEGALA.

REVENUE.

	Money. Rs. c	Total. Rs. c.
Balance on December 31, 1885.		
Unexpended balances on principal works	521 71	
Resthouse collections ...	766 76	
Miscellaneous	1,756 54	
Arrears of commutation ...	828 38	
Commutation of 1885 ...	1,470 76	
		5,344 15
Carried over...		5,344 15

	Money Rs. c.	Total. Rs. c.
Brought forward...		5,344 15
Receipts in 1886.		
Arrears of commutation ...	545 0	
Resthouse collections ...	1,107 82	
Miscellaneous	1,138 69	
Unexpended balances on principal works	1,606 69	
Commutation of 1886 ...	47,788 50	
		52,186 70
By labour rendered in 1886 (11,604 men).		
Total...	—	57,530 85

EXPENDITURE.

Salaries of Establishment, &c.			
Salaries and allowances ...	6,475 63		
Commission to Division Officers ...	5,238 75		
Cost of tools and other miscellaneous expenses ...	2,724 67		
		14,439 5	
Resthouses.			
Repairs to resthouses and bungalows	1,999 81		
Pay of resthouse-keepers, cost of furniture, &c. ...	2,741 17		
		4,740 98	
Principal Roads.			
Polgahawela to Galagedara ...	10,011 50		
Kurunégala to Nikawęratiya ...	10,497 50		
Do. Beligama ...	819 50		
Do. Giriulla ...	1,701 0		
Pádeniya to Kalá-oya ...	1,830 0		
Nárammala to Dummalasúriya ...	1,444 50		
		27,304 0	
Minor road, Circular ...	508 11		
Do. Raugama ...	811 33		
Do. Chilaw ...	1,266 8		
Do. Mátalé ...	1,289 71		
Do. Danktouwa ...	814 9		
Do. Rambáwęwa ...	1,225 1		
Do. Balalla ...	380 44		
Do. Kalugalla ...	524 15		
Do. Kohombepola ...	684 22		
Do. Arasanwęwa ...	449 14		
Do. Ambalé ...	107 96		
Do. Bemmullégedara ...	256 79		
Do. Ibbágomuwa ...	248 45		
Carried over...	8,565 48	46,484 3	

Brought forward...	8,565 48	46,484 3
Minor road, Nátandi ...	191 70	
Do. Malakoliya ...	130 70	
Do. Talampitiya ...	225 19	
Do. Yápahu ...	113 74	
Do. Kobeigané ...	85 36	
Do Allawwa ...	112 75	
Do Potuhęra ...	39 64	
Do. Talakolahéna ...	71 22	
Do. Giratalána ...	227 24	
Do. Węuda Nolaulla ...	75 0	
Do. Angomu, new ...	241 63	
Do. Galgomuwa to Maha Nannériya ...	204 30	
Do. Ratgala ...	47 72	
		10,331 67
		56,815 70
Balance on December 31, 1886		
Commutation of 1886 ...	11 22	
Commutation arrears ...	10 67	
Resthouse collections ...	586 74	
Miscellaneous ...	23 41	
Unexpended balances on principal works	83 11	—
		715 15
Total...	—	57,530 85

Labour on Principal roads (men) ...	992
Labour on Minor roads (men) ...	10,612
Total...	11,604

Provincial Road Committee's Office,
Kurunegala, August 23, 1887.

R. G. ANTHONISZ, } Members.
D. C. AMARASEKARA, }

P. A. TEMPLER,
Chairman.

PUTTALAM.

REVENUE.

	Amount. Rs. c.	Total. Rs. c.
Balance on December 31, 1885.		
Current year's commutation ...	1,344 6	
Former do. ...	53 22	
Resthouse collections ...	204 39	
Miscellaneous ...	365 17½	
Advance outstanding ...	844 74	
		2,811 58½
Carried over...	—	2,811 58½
Brought forward...	—	2,811 58½
Revenue of the current year.		
Former year's commutation ...	804 0	
Unexpended balance on principal roads for 1884 and 1885 ...	222 90	
Resthouse collections ...	511 9	
Miscellaneous ...	207 6	
Current year's commutation ...	21,297 0	
Do. by labour ...	1,779 0	
		24,857 5
Total...		27,668 63½

EXPENDITURE.

Principal roads and canals ...	5,275 50	
By labour ...	916 50	
		6,192 0
Akkarai Pattu roads ...	1,956 49	
By labour ...	64 50	
		2,020 99
Andigama-Madurankuli-road ...	175 33	
By labour ...	22 50	
		197 83
Demala Hatpattu road ...	27 25	
By labour ...	373 50	
		400 75
Munesseram road ...	530 74	
By labour ...	18 0	
		548 74
Chilaw town roads ...	731 71	
By labour ...	15 0	
		746 71
Uraliya-road ...	240 22	
By labour ...	9 0	
		249 22
Kompasu-páru ...	360 30	
By labour ...	10 50	
		370 80
Kammala-road ...	13 50	
By labour ...	85 50	
		99 0
Tambaráwila road ...	13 50	
By labour ...	51 0	
		64 50
Bólawatta-road ...	169 81	
By labour ...	57 0	
		226 81
Dummaladeniya-road ...	9 0	
By labour ...	48 0	
		57 0
Carried over...	—	11,174 35
Brought forward...	—	11,174 35
Bandiyirippu-road ...	18 0	
By labour ...	58 50	
		76 50
Maráwila-Nátandiya-road ...	1,099 86	
By labour ...	49 50	
		1,149 36
Kalpitiya town road ...	120 80	
Madurankuli-Toduwa-road ...	1,224 9	
Keriyankalli-road ...	149 8	
Wellawela road ...	149 10	
Bangadeniya-road ...	68 66	
Mádampé bazaar-road ...	96 78	
Toppu minor road ...	474 90	
		2,283 41
Resthouses.		
Building and repairing ...	3,567 17	
Pay of resthouse-keepers ...	1,220 0	
		4,787 17
Establishment.		
Salaries ...	1,527 0	
Commission to Division Officers ...	3,462 78	
Stationery and miscellaneous ...	928 83	
		5,918 61
Balance on December 31, 1886.		
Current year's commutation ...	409 59	
Former do. ...	9 99	
Resthouse collection ...	168 6	
Miscellaneous ...	15 46½	
Advance outstanding ...	1,676 13	
		2,279 23½
Total...	—	27,668 63½

Puttalam, March 18, 1887.

J. A. De Silva, J. E. Nicholas, } Members.

C. M Lushington, Chairman.

NORTHERN PROVINCE.

Districts and Divisions.	Labour of Money realised. Amount received in Commutation.	Value of Commutation of Labour.	Total.
JAFFNA.	Rs. c.	Rs. c.	Rs. c.
Jaffna.			
Nallur ...	1,236 0		
Kokkuvil ...	1,388 0		
Vannarponnai East ...	1,639 0		
Do. West ...	1,622 0		
Chundiculi ...	834 0		
Karaiur ...	1,416 0		
Choviateru ...	1,000 0		
		—	9,135 0
Valikámam East.			
Koppai South ...	657 0		
Nirwali ...	677 0		
Koppai North ...	845 0		
Puttur ..	1,641 0		
Achchuveli ...	1,135 0		
		—	4,958 0
Valikámam North.			
Mallakam ...	345 0		
Alaveddy ...	878 0		
Elalai ...	745 0		
Punnalaikadduvan ...	430 0		
Tellipallai East ...	692 0		
Tellipallai West ...	859 0		
Maviddapuram ...	404 0		
Vimankamam ...	668 0		
Uduvil ...	1,881 0		
Mailiddy ...	1,680 0		
		—	8,582 0
Valikámam West			
Manippai ...	1,140 0		
Chanderupai ...	960 0		
Chankanai ...	1,078 0		
Pandateruppu ...	1,506 0		
Vaddukoddai ...	2,106 0		
Tholpuram ...	1,285 0		
		—	8,375 0
Vaḍamirâḍchi.			
Kerudavil ...	227 0		
Alvai North ...	908 0		
Alvai South ...	368 0		
Kuruli ...	1,280 0		
Thanakarakurichi ...	600 0		
Valluveddituraí ...	866 0		
Karanavai ...	1,445 0		
Thunnalai ...	1,535 0		
Ploly East ...	1,829 0		
Ploly West ...	1,294 0		
		—	10,352 0
Tenamirâḍchi.			
Navetkuli ...	1,343 0		
Chavakachcheri ...	1,755 0		
Nunavil ...	1,698 0		
Varani ...	2,075 0		
Elutumadduval ...	1,203 0		
Kachchai ...	1,314 0		
		—	9,388 0
Pachchelaipalle.			
Mukamalai ...	324 0		
Kelaly ...	318 0		
Plopalai ...	310 0		
Thanmakoni ...	184 0		
Chempianpattu ...	268 0		
Carried over...	1,404 0	—	50,790 0

Districts and Divisions.	Labour of Money realised. Amount received in Commutation	Value of Commutation of labour	Total
	Rs. c.	Rs. c.	Rs. c
Brought forward...	1,404 0	—	50,790 0
Mukavil ...	231 0		
Mullian ...	453 0		
		—	2,088 0
Karachchi.			
Kandavalai ...	275 0		
Pandisuddan ...	118 0		
Paranthan ...	131 0		
		—	524 0
Pooneryn.			
Ottapanai ...	526 0		
Madduvilnadu ...	296 0		
Pallavarayakadu ...	158 0		
		—	980 0
Islands.			
Allaipiddi ...	696 0		
Valanai East ...	547 0		
Valanai West ...	268 0		
Kayts ...	334 0		
Charavanai ...	285 0		
Naranthanai ...	320 0		
Karampan ...	475 0		
Karativu East ...	763 0		
Karativu West ...	852 0		
Punkudutivu East ...	452 0		
Do. West ...	434 0		
Anaitivu ...	261 0		
Nainativu ...	170 0		
Neduntivu East ...	44 0		
Do. Middle ...	20 0		
Do. West ...	115 0		
		—	6,036 0
Add:			
Proceeds sale of abandoned roads, trees, &c., on road sides ...	—	78 28	
Miscellaneous ...	—	5,166 30	
			5,244 58
Balance of preceding year which had not been appropriated in any particular work...	—	—	20,097 11
			85,769 69
MANNÁR.			
Mannar East ...	843 75		
Do Central ...	901 25		
Do West ...	1,223 75		
Mantai North ...	352 50		
Do South ...	405 0		
Perunkali ...	462 50		
Illuppaikadavai ...	150 0		
Nanadan East ...	541 25		
Do. West ...	625 0		
Musali North ...	552 50		
Do. South ...	418 75		
		—	6,476 25
Miscellaneous ...	—	—	65 11
Balance on December 31, 1885 ...	—	—	613 40
			7,154 76

Districts and Divisions.	Labour of Money realised. Amount received in Commutation.	Value of Commutation of Labour.	Total.
	Rs. c.	Rs. c.	Rs. c
MULLAITTIVU.			
Karikaddumullai North	797 50		
Do. South	237 50		
Mulliavalai ...	342 50		
Putukudyiruppu ...	383 75		
Melpattu North ...	226 25		
Karunavalpattu South	107 50		
Tunukkai ...	122 50		
		2,217 50	
Collection by fine of Rs 1·25 ...	–	47 50	
			2,265 0
Balance on December 31, 1885 ..	—	—	1,289 25
			3,554 25
VAVUNIYA VILANKULAM			
Kilakkumullai North ...	390 0		
Do. South	507 50		
Carried over...	897 50		

Districts and Divisions.	Labour of Money realised. Amount received in Commutation.	Value of Commutation of Labour.	Total.
	Rs. c.	Rs. c	Rs. c
Brought forward...	897 50		
Kilakkumullai South Sinkalise ...	258 75		
Naduchchedikulam ...	275 0		
Sinnachchedikulam East	305 0		
Do. West	163 75		
Do East and West, Sinkalise ...	65 0		
Merkkumullai ...	111 25		
Panankamam ...	147 50		
Melpattu East ...	258 75		
Do South ...	107 50		
Udayaur ...	123 75		
		2,713 75	
Miscellaneous receipts	—	34 26	
			2,748 1
Balance on Dec. 31, 1885		—	225 4
			2,973 5

EXPENDITURE

Description of Works	Total length of each Road.	Length worked on.	Expenditure From Road Ordinance Funds.	From General Revenue.	Total.	Nature of Work done.
JAFFNA.						
Principal Roads.	M. f yds	M. f yds	Rs. c.	Rs c.	Rs. c	
Gravel roads, Jaffna	39 0 0	Nearly all	3,318 13	1,848 41	5,166 54	The necessary repairs to the surface slopes, side drains culverts, &c.
Chemmani road ...	4 0 0	do.	397 15	315 4	712 19	do. do.
Jaffna to Karativu ...	13 4 0	do	996 93	992 68	1,989 61	do. do.
Jaffna to Punnalai ...	10 0 0	do.	797 85	590 5	1,387 90	do. do.
Jaffna to Kanakesanturai ...	11 4 0	do.	748 0	1,527 30	2,275 30	do. do.
Point Pedro to Punalai	24 4 0	do.	976 44	629 76	1,606 20	do. do.
Jaffna to Point Pedro	21 0 0	do.	1,668 17	1,146 47	2,814 64	do. do.
Point Pedro to Kodikamam ...	8 4 0	do	763 82	606 1	1,369 83	do. do.
Puttur to Kodikamam	8 4 0	do.	535 95	395 68	931 63	do. do.
Mampai to Kaitadi ...	8 0 0	do.	672 3	390 78	1,062 81	do. do.
Valla to Valuvettiturai	3 4 0	do.	166 37	139 79	306 16	do. do.
Valukaiyar to Kayts ...	8 0 0	do.	398 42	147 0	545 42	do. do.
Jaffna to Kaitadi ...	6 0 0	do.	793 80	694 49	1,488 29	do. do.
Kaitadi to Elephant Pass ...	27 0 0	do.	5,158 75	—	5,158 75	do. do.
Elephant Pass to Pamchankulam ...	23 0 0	do.	642 83	4,421 54	5,064 37	do. do.
Coast road to Colombo.	69 0 0	do.	377 48	2,449 35	2,826 83	do. do.
Boat channel, Jaffna...	—	do.	1,019 63	1,918 26	2,937 89	Deepening the channel and providing guide-posts where necessary
Gravel roads, vote of 1885 ...	—	—	7 0	—	7 0	—
Boat channel, vote of 1885 ...	—	—	38 39	—	38 39	—
			19,477 14	18,212 61	37,689 75	
Buildings						
Resthouse at Elephant Pass ...	—	—	945 24	—	945 24	Alterations and improvements
For building a stable and coach-house for the Elephant Pass resthouse ...	—	—	621 77	—	621 77	—

Description of Work.	Total length of each Road.	Length worked on.	Expenditure. From Road Ordinance Funds.	Expenditure. From General Revenue.	Expenditure. Total	Nature of Work done.
	M. f. yds.	M. f. yds.	Rs. c.	Rs. c.	Rs. c	
Urgent and immediate repairs to resthouses in the Province ...	—	—	3,072 82	—	3,072 82	—
Minor Works						
Kondavil-Irupalai-road repair ...	2 6 0	0 4 120	152 90	—	152 90	Completed thorough repair for 1,000 lineal yards, repaired drains, and cleared side drains
Urumpirai-road repair	9 2 66	2 7 140	705 4	—	705 4	do. 5,200 do.
Pasaiyur cross roads repair ...	0 3 100	0 20 60	49 76	—	49 76	do 500 do
Navanthurai cross road repair ...	0 3 200	0 2 60	49 93	—	49 93	do. 500 do.
Roads in the town of Jaffna ...	1 5 30	1 3 80	490 93	—	490 93	do. 2,500 do.
Extension of Kondavil Irupalai-road, construction ...	1 1 0	0 4 10	707 31	—	707 31	Gravelled the road for 1,050 lineal yards for 15 feet road way, built drains, and turfed slopes
Chankanai-Vallai-road repair ...	12 2 0	4 4 180	1,310 23	—	1,310 23	Completed thorough repair for 8,100 lineal yards, repaired drains, and cleared side drains
Chunnakam Puttur-road repair ...	5 0 0	1 3 80	271 51	-	271 51	do. 2,500 do.
Achchelo road repair	2 3 100	0 5 0	131 76	—	131 76	do 1,100 do
Mavidapuram-Keeremalai road repair ...	1 6 0	0 7 60	116 91	—	116 91	do. 1,600 do.
Chunnakam Kantherodai road repair ...	2 2 42	0 5 200	194 4	-	194 4	Completed thorough repair for 1,300 lineal yards, repaired bridges, banked up slopes, and cleared side drains
Thavadi Suthumalai-road repair ...	1 5 154	0 7 160	258 34	—	258 34	do 1,700 do.
Tellipalai Kadduvan-road repair ...	1 3 20	0 2 160	55 69	—	55 69	do 600 do
Sandilipai Santhankulam-road, construction ...	—	1 1 20	177 72	—	177 72	Built drains and banked up slopes, and metalled the road for 475 lineal yards
Araly-Mattakal-road repair ...	7 6 0	3 2 80	703 12	—	703 12	Completed thorough repair for 5,800 lineal yards, repaired bridges, and cleared side drains
Sandilipai-Pandattirruppu-road repair ...	2 5 0	1 1 120	206 35	—	206 35	Completed thorough repair for 2,100 lineal yards, repaired drains, and cleared side drains
Sandilipai - Santhankulam-road repair ...	3 4 0	1 1 20	197 43	—	197 43	do 2,000 do.
Punnalai-road repair...	0 0 200	0 0 200	55 59	—	55 59	do 200 do.
Mulai-road repair ...	0 4 0	0 3 40	82 98	—	82 98	do. 700 do
Anaikkoddai Vadduk-koddai-road repair...	4 0 66	1 7 0	369 1	—	369 1	do 3,300 do.
Additional drains in Vadamiradchi ...	—	—	15 0	—	15 0	Built drains round the Point Pedro market with hammer-dressed rubble and cut coral curbing set in cement, for 41 lineal feet
Surface draining of the Point Pedro market	0 1 113	0 0 31	50 54	—	50 54	—
Point Pedro Customs-Court-house-road repair ...	0 3 156	0 1 80	94 81	—	94 81	Completed thorough repair for 300 lineal yards, repaired drains, and cleared side drains
Drainage-Channel-road repair ...	0 5 0	0 3 140	143 34	—	143 34	do. 800 do.
Point Pedro Market Seashore-road repair	0 2 0	0 0 200	46 53	—	46 53	do. 200 do.
Point Pedro - East Coast-road repair ...	2 7 0	1 3 80	391 87	—	391 87	Completed thorough repair for 2,500 lineal yards, repaired bridges, and cleared side drains

Description of Work.	Total length of each Road.			Length Worked on.			Expenditure. From Road Ordinance Funds.		Expenditure. From General Revenue.	Expenditure. Total.		Nature of Work done.		
	M.	f.	yds.	M.	f.	yds.	Rs.	c.	Rs. c.	Rs.	c.			
Alvai - Tunnalai road repair ...	5	1	0	2	4	200	753	40		753	40	Completed thorough repair for 4,600 lineal yards, repaired drains, and cleared side drains		
Road between Point Pedro ...		–					–		—	—		—		
Road across Caddaveli		--			—		—		—	—		—		
Road to Point Pedro Kodigamam - road repair ..	0	2	0	0	0	200	48	58	—	48	58	do.	200	do
20th mile, Point Pedro to Vallipuram Temple road repair ...	1	6	135	0	3	140	95	36	—	95	36	do.	800	do.
Point Pedro 2nd Cross road repair ...	0	2	176	0	1	80	73	54	—	73	54	do.	300	do.
Point Pedro 3rd Cross road repair ...	0	2	94	0	1	80	54	45	–	54	45	do.	300	do.
Point Pedro 4th Cross road repair .	0	2	0	0	1	80	49	81	—	49	81	do.	300	do.
20th mile, Point Pedro to Alvai road repair	0	2	0	0	0	150	31	13	–	31	13	do.	150	do
Roads in the town of Point Pedro repair ...	0	3	0	0	0	193	56	72	—	56	72	do.	193	do.
Tumpalai-road ..	0	7	200	0	4	20	132	13	—	132	13	do.	900	do.
(9th mile) Point Pedro to Seashore road repair ...	2	0	176	0	6	80	154	92	—	154	92	do.	1,400	do.
Malisantai Udupiddi road repair ..	3	2	18	1	1	20	257	85	—	257	85	do.	2,000	do.
Extension of Navatkuli - Tanankilapu road, construction ...		–			—		369	41	-	369	41	Built drains on the road		
Meesalai - Varam-road repair	4	0	0	1	3	80	188	34	-	188	34	Completed thorough repair for 2,500 lineal yards, repaired drains, and cleared side drains		
Chavakachcheri- Vampernai road repair ...	2	3	0	1	5	140	268	33	–	268	33	do.	3,000	do.
Navatkuli Tanankilappu road repair ...	5	2	185	2	2	40	740	35	—	740	35	do.	4,000	do.
Kodikamam Kachchai	3	0	0	0	7	60	312	4	-	312	4	do	1,600	do.
Chavakachcheri - road repair ...	0	6	0	0	4	120	135	2	-	135	2	do.	1,000	do.
Pallai road, construction ...	2	2	0		-		242	77	-	242	77	Purchased materials for the repair of drains, &c.		
Road from 20th mile, Central road, to the lake, upkeep .	2	3	0	2	3	0	8	22	—	8	22	Cleared jungle overgrown on the roadway and lopped off branches of trees overhanging the road		
Road from 25th mile Central-road, to the lake, upkeep ...		–			–		—		—	—		—		
Maruthankeni Urvamyanpattu-road upkeep ...	3	4	0	3	4	0	20	94	—	20	94	Cleared jungle overgrown on the roadway and lopped off branches of trees overhanging the road		
Maruthankeni - Pallai road ...		—			–		—		—	—		—		
Old road from Chavakachcheri to Pallai-road repair ...	13	0	0		--		97	96	—	97	96	Cleared the roadway for 30 feet in width		
Opening a road from Periyakulam to Puthukudyiruppu ...	14	0	0	2	0	0	1,208	70	–	1,208	70	Traced the road for 14 miles and opened the same for 24 feet width for 2 miles		
Kokkuvil-Tunukai-road upkeep ...	6	0	0	6	0	0	30	0	—	30	0	Cleared jungle for 24 feet in width, filled ruts and holes, and lopped off branches of trees overhanging the road		
Murasumoddai-Paranthan-road upkeep ...	6	0	0	6	0	0	25	0	—	25	0	do.		
Murasumoddai-Kandavalai-road upkeep ...	2	4	100	2	4	100	10	0	—	10	0	do.		

Description of Work.	Total length of each Road.	Length Worked on.	Expenditure. From Road Ordinance Funds.	Expenditure. From General Revenue.	Expenditure. Total.	Nature of Work done.
	M. f. yds.	M. f. yds.	Rs. c.	Rs. c.	Rs. c.	
Kandavalai Punnaneravy-road upkeep ...	5 0 0	5 0 0	25 0	—	25 0	Cleared jungle for 24 feet in width, filled ruts and holes, and lopped off branches of trees overhanging the road
Periyakulam - Kandavelai-road upkeep ...	1 2 0	1 2 0	5 0	—	5 0	do. do.
Vaddakachchi - Periyakulam-road upkeep..	1 1 0	1 1 0	5 0	—	5 0	do. do.
Periyakulam-Puliyampokkany-road upkeep ...	3 0 0	3 0 0	10 0	—	10 0	do. do.
Karukaitivu-Kavaikulam towards Paranthan-road upkeep ...	6 0 0	6 0 0	83 86	—	83 86	do. do
Karukaitivu-Kavaikulam-road upkeep	4 4 0	4 4 0	99 96	—	99 96	do. do.
Mandankelaru-Mannayakulam-road upkeep ...	6 6 0	6 6 0	44 98	—	44 98	do. do.
Road from Velanai to Punkudutivu repair	1 0 0	0 7 60	116 46	—	116 46	Completed thorough repair for 1,600 lineal yards, repaired drains, and cleared side drains
Suruvil - Kayts - road repair ...	3 0 0	1 5 66	149 52	—	149 52	do. 2,926 do.
Valanai bungalow rails repair ...	4 7 0	2 6 110	208 2	—	208 2	do. 4,950 do.
St. James' Church-road repair ...	—	—	—	—	—	—
Karativu South road repair ...	0 6 0	0 2 60	44 88	—	44 88	do. 500 do.
Karativu West-road repair ...	1 7 200	1 4 98	295 0	—	295 0	do. 2,738 do.
Analaitivu-Central-road repair ...	—	—	7 45	—	7 45	Cleared side drains and repaired drains
Road from Kanthasamykovil to Narchchimarkovil ...	—	—	—	—	—	—
Irupiddy Kaliammankovil road repair ...	0 7 0	0 3 49	93 54	—	93 54	Completed thorough repair for 709 lineal yards, repaired drains, and cleared side drains
Velanai ferry to Church-road ...	2 0 80	1 5 190	199 60	—	199 60	do. 3,050 do.
Naimativu East Coast road ...	1 5 110	—	7 20	—	7 20	Cleared side drains and repaired drains
Naimativu 1st Cross-road ...	—	—	—	—	—	—
Deepening the channel at Mavaliturai ...	0 0 66	—	133 73	—	1 73	Deepened a channel by cutting the coral reef for the convenience of landing, &c., at Delft 200 lin. yds. by 24 ft by 3 ft.
Mavaly - Periyaturai-road, construction ...	4 2 0	—	42 0	—	42 0	Salary of overseer for supervising Road Ordinance defaulters' work, &c., on this road
Mavaly South road ...	2 0 0	—	19 44	—	19 44	do. do.
Thoertakarai road ...	—	—	—	—	—	—
Bangalow South-road	2 4 0	—	7 50	—	7 50	Transporting tools to work in Delft
Neluvonai-Kokkaddimunai or Charapiddi-road upkeep ...	—	—	—	—	—	—
Well works in the Province ...	—	—	1,931 97	—	1,931 97	Built with cut coral four wells in the Mullaittivu district, two wells in the Mannar district, one well in the Vavuniya Vilankulam district, and effected general repairs to all public wells in the Province
For building wells at Iranamadu and Utiravankai ...	—	—	754 23	—	754 23	—
Commission to Division officers ...	—	—	7,147 42	—	7,147 42	—
Establishment ...	—	—	7,784 0	—	7,784 0	—

Description of Work.	Total Length of each Road.	Length Worked on.	Expenditure. From Road Ordinance Funds.	Expenditure. From General Revenue.	Expenditure. Total.	Nature of Work done.
	M. f. yds.	M f yds	Rs. c	Rs. c	Rs. c.	
Miscellaneous ...	—	—	9,632 6	—	9,632 6	
Travelling allowance to the Superintendent of Minor roads and pay of resthouse, madam keepers, &c.	—	—	2,601 35	—	2,601 35	
Cost of tools, &c. ...	—	—	—	247 25	247 25	
			67,959 75	18,459 86	86,419 61	
Add balance on December 31, 1886, including outstanding	—	—	17,799 94			
			85,759 69			
MANNAR.						
Principal Road.						
Yakkavai-Pesalai road	54 6 0	Nearly all	1,763 45	221 92	1,985 37	The necessary repairs to the surface slopes, side drains, culverts, &c.
Minor Roads						
Mannar streets ...	7 0 0	0 0 75	104 80	—	104 80	Repaired seven culverts and filled up 75 yards of low ground in Moors' quarter
Thalvapado road ...	2 2 0	0 6 80	250 0	—	250 0	Raised and repaired 2,400 yds. along the line
Errukkalanpitti causeway ...	1 0 0	—	200 0	-	200 0	Repaired the causeway, filled in the bottom with concrete and masonry work
Pesalai town road ...	0 4 0	—	300 0	—	300 0	Raised the road with clay from Catholic church to cemetery
Madu road ...	13 4 0	13 4 0	400 0	–	400 0	Cleared side drains, raised and levelled hollows between Mantai and Parapukadantan
Vidataltivu Manalkulam by Chalampan...	12 0 0	12 0 0	100 0	–	100 0	Filled up ruts and holes along the whole line
Vidataltivu Manalkulam by Adampan ...	12 0 0	12 0 0	100 0	—	100 0	do. do.
Silavatturai Parayan Alankulam ...	18 4 0	18 4 0	300 0	–	300 0	Effected general repair through the whole line
Silavatturai to Anuradhapura ...	14 0 0	14 0 0	100 0	–	100 0	do. do.
Achchankulam-road ...	4 0 0	4 0 0	50 0	–	50 0	do. do.
Periyapillachypotkany	8 0 0	8 0 0	50 0	-	50 0	do. do.
Mileage clearing of roads of Mannar district ...	108 6 0	92 6 0	473 75	—	473 75	Cleared the jungle and overgrowth at Rs. 5 per mile.
General Charges.						
Establishment ...	—	—	500 0	—	500 0	
Commission to division officers ...	—	—	937 29	—	937 29	
Miscellaneous ...	—	—	100 62	—	100 62	
			5,729 91	221 92	5,951 83	
Advances outstanding	—	—	1,236 55			
Balance on December 31, 1886 ...	—	—	188 30			
			7,154 76			
MULLAITTIVU.						
Principal Road.						
Mullaittivu Old-road...	27 0 0	—	622 56	282 1	904 57	The necessary repairs to the surface slopes, side drains, culverts, &c.
Do. vote of 1885	—	—	626 60	—	626 60	—
Minor Roads.						
Andankulam to Vadduvanvelli ...	2 4 0	2 4 0	12 50	—	12 50	Clearing and improving
Mullaittivu to Kokulai ...	24 0 0	13 0 0	75 0	—	75 0	do. do.
Mullaittivu to Kumulamunai ...	8 4 0	6 0 0	30 0	—	30 0	do. do.

Description of Work.	Total Length of each Road.	Length Worked on.	Expenditure. From Road Ordinance Funds.	Expenditure. From General Revenue.	Expenditure. Total	Nature of Work done
	M. f. yds.	M. f. yds.	Rs c	Rs. c.	Rs. c	
Puthukudyiruppu to Mattalan ...	4 0 0	4 0 0	20 0	—	20 0	Clearing and improving
Puthukudyiruppu to Eraddaivaikal ...	4 0 0	4 0 0	0 0	—	20 0	do do
Puthukudyiruppu to Mannakandal ...	5 0 0	5 0 0	29 50	—	29 50	do do.
Oddisuddan to Mannakandal ...	6 0 0	6 0 0	30 0	—	30 0	do do.
Oddisuddan to Kalikkadu ...	5 0 0	5 0 0	25 0	—	25 0	do. do.
Oddisuddan to Nedunkeni ...	7 0 0	7 0 0	45 80	—	45 80	do. do
Mullaivalai to Vattapalai ...	2 0 0	1 0 0	5 0	—	5 0	do do.
Mankulam to Tunukkai ...	12 4 0	12 4 0	62 50	—	62 50	do do.
Tunukkai to Chellavellu ...	7 0 0	7 0 0	35 0	—	35 0	do. do
Do to Paliar ...	1 4 0	1 4 0	7 50	—	7 50	do do
Do to Tekalamavillu...	6 0 0	6 0 0	30 0	—	30 0	do do
Do. towards Kokuvil...	15 0 0	15 0 0	75 0	—	75 0	do. do.
Kokuvil to Kanagarayankulam ...	20 0 0	20 0 0	100 0	—	100 0	do. do.
Hospital-road ...	0 2 0	0 2 0	75 0	—	75 0	Raising and turfing
Hospital main road ...	1 0 0	1 0 0	76 63	—	76 63	Repairing and extending
For roads and culverts in town ...	—	—	79 22	—	79 22	Repairing and building a new culvert
For culverts at Tunukkai ...	—	—	47 50	—	47 50	Repairing, &c.
Pay of boatman at Kokulai ...	—	—	30 0	—	30 0	
Do at Nayar ...	—	—	15 0	—	15 0	—
Do. at Vaddu vakallu...	—	—	21 4	—	21 4	—
For watering ornamental trees ...	—	—	52 50	—	52 50	—
Cost of tools, &c. ...	—	—	—	32 75	32 75	—
General Charges.						
Establishment ...	—	—	240 0	—	240 0	—
Commission to Division officers ...	—	—	277 68	—	277 68	—
Miscellaneous ...	—	—	139 41	—	139 41	
Refund of charges ...	—	—	7 50	—	7 50	
			2,913 44	314 76	3,228 20	
Advances outstanding	—	—	430 41			
Balance on December 31, 1886 ...	—	—	210 37			
			3,554 2			
V.-VILÁNKULAM.						
Principal Road.						
Panikankulam to Galkandamadu ...	39 0 0	Nearly all	1,145 97	7,483 83	8,629 80	The necessary repairs to the surface slopes, side drains, culverts, &c.
Minor Roads.						
Vavuniya - Vilankulam to Parayanalankulam	22 0 0	22 0 0	110 0	—	110 0	Clearing jungle to a width of 27 ft. and uprooting stumps to a width of 18 ft.
Puvarasankulam to Paliar ...	30 0 0	30 0 0	150 0	—	150 0	do. do.
Nelukkulam to Mankulam ...	13 0 176	13 0 176	65 50	—	65 50	do. do
Puvarasankulam to Venkalachchedikulam ...	7 1 176	7 1 176	36 0	—	36 0	do do.
Peramanalankulam to Madu ...	9 0 0	9 0 0	45 0	—	45 0	do do
Madu to Aravillu ...	4 0 0	4 0 0	20 0	—	20 0	do. do.
Omantai to Maraluppai	6 0 0	6 0 0	30 0	—	30 0	do. do.

Description of Work.	Total Length of each Road.	Length worked on.	Expenditure. From Road Ordinance Funds.	Expenditure. From General Revenue.	Expenditure. Total.	Nature of Work done
	M. f yds.	M. f. yds	Rs. c.	Rs. c.	Rs c.	
Maraluppai to Ananterpulankulam ...	9 0 0	4 0 0	20 0	—	20 0	Clearing jungle to a width of 27 ft. and uprooting stumps to a width of 18 ft.
Nainamadu to Ananterpulankulam ...	4 0 0	4 0 0	20 0	—	20 0	do. do.
Nedunkeni to Kulankulam ...	10 0 0	10 0 0	50 0	—	50 0	do. do.
Town roads ..	3 4 0	3 4 0	26 75	—	26 75	Clearing jungle to a width of 27 ft. and uprooting stumps to a width of 18 ft., and repairing culverts
Cemetery road ...	0 4 0	0 4 0	103 22	—	103 22	Cutting side drains, gravelling, and building one dry stone culvert (double drain)
New trace from the Trincomalee road to the Outer and to the Inner road ...			18 35	—	18 35	Clearing weeds and uprooting stumps
Mannar road .		—	65 15	—	65 15	Building one new culvert at Nelukkulam, repairing three culverts at Nelukkulam, and one at Kannaddi
Cost of tools ...	—	—	—	50 0	50 0	—
General Charges						
Establishment ...	-	—	240 0	—	240 0	—
Commission to Division officers ...	—	—	264 12	.	264 12	—
Miscellaneous ...	—	—	116 81		116 81	—
			2,526 87	7,533 83	10,060 70	
Advances outstanding	—	—	90 3			
Balance on December 31, 1886 ...	-	--	356 15			
			2,973 5			

Abstract of Expenditure of Road Ordinance and Treasury Money, for 1886.

	Jaffna.	Mannar.	Mullaittivu.	Vavuniya-Vilankulam.	Total
From Road Ordinance Funds	Rs c	Rs c	Rs c	Rs. c.	Rs. c.
Percentage to Division Officers ...	7,147 42	937 29	277 68	261 12	8,626 51
Miscellaneous charges	9,632 6	100 62	116 91	116 81	9,996 40
Purchase of lands and compensation of gravel pits	--		—	--	—
Establishment	10,385 35	500 0	240 0	240 0	11,365 35
Principal roads and buildings	21,116 97	1,763 45	1,249 16	1,145 97	28,275 55
Minor roads, &c	16,677 95	2,428 55	999 69	759 97	20,866 16
Total ...	67,959 75	5,729 91	2,913 44	2,526 87	79,129 97
From General Revenue.					
For value of to	247 25	—	32 75	50 0	330 0
For other char	18,212 61	221 92	282 1	7,483 83	26,200 37
Total ...	18,459 86	221 92	314 76	7,533 83	26,530 37
Grand Total ...	86,419 61	5,951 83	3,228 20	10,060 70	105,660 34

Abstract of Balances.

	Rs c
Jaffna	17,799 94
Mannar	1,424 85
Mullaittivu	640 81
Vavuniya-Vilankulam ...	446 18
Total ...	20,311 78

Total Extent of Roads in each District.

		Principal Roads Miles	Minor Roads Miles	Total Miles.
Peninsula	Gravelled roads	155	98½	253½
	Traced roads raised and formed	—	144¾	144¾
Islands	Gravelled roads	2	26	28
	Raised, but not gravelled	9	9	18
Mainland	Gravelled roads	3	–	3
	Raised, but not gravelled	50	59½	109½
Mannar		141	201½	342½
Vanni		45	249	294
	Total	405	788	1,193

Audited by
C. STRANTENBERG
T. M. TAMPOO

W. H. JACKSON,
for Chairman.

Provincial Road Committee.
Jaffna, August 11, 1887.

PROVINCE OF UVA.

REVENUE

	In Money		In Labour		Total.	
	Rs.	c.	Rs.	c.	Rs	c
Balance brought forward from 1885 of Commutation, Resthouse, and Miscellaneous Funds	—		1,418	23		
By Commutation and Labour of 1886	31,517	6				
Arrears of Commutation	97	75				
Settlement of advances made from Commutation Funds	2,272	58				
			33,887	39		
Resthouses	—		2,782	68		
Miscellaneous Receipts	-		51	91		
Amount received in 1886 on account of Road Tax for 1887			33	0	38,203	21
Total	—		-		38,203	21

EXPENDITURE

	In Labour.		Total.	
	Rs	c.	Rs.	c
Principal Roads and Resthouses	9,003	49		
Minor roads and bridges	8,989	39		
Charges, pay of Establishment, Commission to Division Officers, &c	8,999	64		
Payments on account of Resthouses	4,951	89		
			31,944	41
Balance on December 31, 1886, from Commutation, Resthouses, and Miscellaneous Funds	—		6,258	80
Total	—		38,203	21

Æ. ARMSTRONG KING,
Chairman.

NORTH-CENTRAL PROVINCE.

REVENUE

	Rs. c.	Rs. c.	Rs. c.
Balance on January 1, 1886	8,579 48		
Advances outstanding	5,951 16		
		14,530 64	
Collected for 1886 under the provisions of the Road Ordinance of 1861, Amendment Ordinance of 1884, viz.:—			
Commutation realised in money	24,601 50		
Do in labour	1,413 0		
Commutation of previous years collected in 1886 ...	404 0		
Miscellaneous receipts	661 41	27,082 91	
			41,613 55
Resthouses			
Balance under this head on January 1, 1886 ...	—	1,795 55	
Collections in 1886	—	1,255 17	
			3,050 72
Market.			
Balance under this head on January 1, 1886 ...	—	1,011 13	
Collections in 1886	—	1,184 8	
			2,195 21
Total ...	—	—	46,859 48

EXPENDITURE

	Rs c.	Rs. c.	Rs c
Payments made on account of principal roads and resthouses from commutation money during 1886, under the provisions of the Road Ordinance of 1861, Amendment Ordinance of 1884 ...	11,298 26		
Minor roads	7,703 51		
		19,001 77	
General Charges			
Pay of the Establishment, including pay of Superintendent of Minor Roads	2,018 20		
Percentage to division officers	2,973 30		
Petty expenses	336 95		
Value of tools, &c	1,074 61		
		6,433 6	
			25,434 83
Resthouses.			
Payments made in 1886	—	—	1,200 42
Market			
Payments made in 1886		—	635 87
Balance of 1886 and previous years			
Balance on Road Ordinance funds	3,486 43		
Advances outstanding	12,692 29		
		16,178 72	
Balance to the credit of Resthouses	—	1,850 30	
Do Market	—	1,559 34	
			19,588 36
Total ...	—	—	46,859 48

Provincial Road Committee,
Anuradhapura, August 12, 1887

R. W. IEVERS,
Acting Chairman.

WESTERN PROVINCE.

PROVINCIAL ROAD COMMITTEE.

Receipts.	Amount. Rs. c.	Total. Rs. c.
Balance on December 31, 1885, brought forward.		
On account of resthouses ...	7,942 80	
General funds	547 84	
		8,490 64
Resthouse Funds		
Contribution from District Committees	18,962 44	
Value of articles broken or lost ...	146 19	
		19,108 63
Principal Works.		
Contribution from District Committees	47,004 50	
Unexpended balances of estimates of 1885 and previous years ...	4,561 35	
		51,565 85
Toll Grant.		
Government contribution on account of toll grant works ...	21,945 65	
Unexpended balances of 1885 refunded by District Committees	48 63	
		21,994 28
Grant for Tools.		
Amount received from Treasurer...	—	330 0
Road from Attanagalla to Ruanwella.		
Amount received from Director of Public Works	—	5,000 0
Establishment.		
Contribution from District Committees	—	3,000 0
Miscellaneous.		
Proceeds sale of unserviceable tools and other small receipts ...	—	109 91
Total ...	—	109,599 31

Payments.	Amount. Rs. c.	Total. Rs. c.
Resthouse Funds.		
Amount expended for upkeep, repair and improvements of resthouses	—	17,275 46
Principal Works.		
Amount remitted to Director of Public Works	47,004 50	
Unexpended balances of estimates remitted to the Hon. the Treasurer	4,561 35	
		51,565 85
Toll Grant.		
Amount apportioned to District Committees		21,945 65
Grant for Tools.		
Amount expended for purchase of tools	329 71	
Unexpended balances of grant remitted to Hon. the Treasurer ...	0 29	
		330 0
Road from Attanagalla to Ruanwella.		
Amount remitted to District Road Committee, Kegalla, to meet expenditure	—	4,596 70
Establishment.		
Amount expended in 1886 ...	—	2,462 78
Miscellaneous.		
Amount expended ...	—	67 5
Balance on December 31, 1886.		
Resthouse funds	—	9,775 97
General funds	—	1,579 85
Total ...	—	109,599 31

Provincial Road Committee,
Colombo, September 12, 1887.

F. R. Saunders,
Chairman.

DISTRICT ROAD COMMITTEES.

COLOMBO.

Receipts	Amount. Rs. c.	Total Rs. c.
To Balance on December 31, 1885, as per last annual statement ...	20,711 70	
Deduct		
Funds of the Provincial Committee included in the above balance	8,490 64	
		12,221 6
Balance of advances made in 1885 to District Road Committees refunded	—	1,919 36
Receipts on 1886		
Commutation of 1886 ..	71,074 50	
Labour	5,502 50	
Labour supplied to toll grant roads	321 0	
		76,898 0
Commutation on account of previous years	2,540 25	
Labour do do ..	2,487 37	
		5,027 62
Amount of toll grant ..	—	9,919 85
Collections at resthouses ..	—	1,136 42
On General Account		
Fines paid by defaulters ...	238 0	
Expenses on account of defaulters	404 58	
Commutation and sundry receipts to be hereafter disposed of ...	611 13	
Value of rails paid by District Committees	1,875 0	
Proceeds sale of unserviceable tools and value of tools lost ...	77 14	
Unexpended balance of an amount remitted to the Government Agent, Colombo, for the purchase of land for the improvement of a minor road refunded ...	405 65	
		3,611 50
Total ...		110,733 81

Payments.	Amount. Rs. c.	Total. Rs. c.
Principal Roads and Canals.		
Commutation ...	32,802 75	
Labour	911 50	
		33,714 25
Minor Roads and Canals.		
Commutation	17,240 34	
Labour	7,078 37	
		24,318 71
Toll Grant Roads.		
Amount expended ...	6,952 63	
Unexpended balance of grant for 1886 remitted to Director of Public Works ...	323 88	
		7,276 51
Establishment		
District Road Committee ...	—	7,351 35
Contribution to Provincial Road Committee.		
On account of establishment ...	600 0	
On account of resthouses ...	5,100 0	
		5,700 0
Charges incurred on account of Commutation and Labour.		
Commission to division officers	4,107 99	
Stationery and printed forms ...	1,655 81	
Cost of labour centres ...	541 2	
Value of tools ...	547 2	
Pay of overseers ...	63 66	
		6,915 50
Resthouse Funds		
Pay of resthouse-keepers ...	—	1,027 75
On General Account.		
Value of stores ...	638 90	
Cost of transport ...	122 6	
Compensation paid on opening of new minor road ...	260 10	
Value of rails	2,812 50	
Surcharge on toll grant, 1884	921 26	
Surveying	372 0	
Refund of Commutation and miscellaneous deposits ...	353 50	
Repairs to office and stores ..	178 97	
Petty expenses ...	349 55	
		6,008 84
By Balance on December 31, 1886.		92,312 91
Cash	10,713 41	
Advances to other District Committees to be refunded ...	7,707 49	
		18,420 90
Total ...	—	110,733 81

District Road Committee,
Colombo, September 12, 1887.

F. R. SAUNDERS,
Chairman.

NEGOMBO.

Receipts.	Amount. Rs. c.	Total. Rs. c.
Balance brought forward from 1885	29,657 38	
By commutation of 1886 ...	34,838 0	
Labour	1,087 50	
Arrears of commutation ...	677 25	
Labour	15 75	
Amount of toll grant received from Director of Public Works..	1,660 0	
Miscellaneous	5,975 77	
Resthouse collections ...	434 30	
		74,345 95
Total ...		74,345 95

Payments.	Amount. Rs. c.	Total. Rs. c.
To Director of Public Works—Contribution towards principal roads and canals :—		
Cash	12,748 50	
Labour	439 50	
Minor Roads.		
Labour { Current ...	648 0	
Labour { Arrears ...	15 75	
Commutation	9,656 21	
Toll grant	1,594 1	
Establishment.		
District Road Committee ...	2,707 14	
Contribution to Provincial Road Committee	600 0	
Commission to division officers { Current...	3,597 7	
Commission to division officers { Arrears...	191 52	
Cost of stationery and printed forms	327 59	
Cost of tools	53 75	
Labour centres	1,006 98	
Contribution to resthouse funds ...	2,500 0	
Resthouse keepers' pay, &c. ...	407 0	
Small repairs to the resthouses ...	430 72	
Miscellaneous	7,181 5	
Balance on December 31, 1886 ...	30,241 16	
		74,345 95

District Road Committee's Office,
Negombo, March 31, 1887

S. Haughton,
Chairman

KALUTARA.

Receipts	Amount. Rs c.	Total. Rs c
Balance brought forward from 1885	—	8,192 10
Commutation of 1886 ...	41,667 0	
Labour of 1886	6,411 0	
		48,078 0
Arrears of commutation ...	1,181 50	
Do. labour ...	3,328 25	
		4,509 75
Amount of toll grant received from the Director of Public Works ...	—	7,100 0
Miscellaneous	1,351 21	
Do. (cross entry) ...	1,985 54	
		3,336 75
Resthouse collections ...	—	798 71
Total ...		72,015 31

Payments.	Amount. Rs. c.	Total Rs c
To Director of Public Works—Contribution towards principal roads and canals :—		
Cash	16,110 0	
Labour	135 0	
		16,245 0
Minor roads and canals :—		
Commutation ...	12,407 11	
Labour	9,604 25	
		22,011 36
Toll grant :—		
Expended by the District Road Committee ...	7,072 75	
Unexpended balance remitted to Public Works Department	27 25	
		7,100 0
Establishment	—	3,331 25
District Road Committee ...	—	1,114 23
Contribution to Provincial Road Committee	—	600 0
Commission to division officers (arrears)	—	4,984 72
Cost of stationery and printed forms	—	444 34
Cost of tools	99 40	
Do. (cross entry) ..	67 76	
		167 16
Labour centres	0 1	
Do. (cross entry) ...	847 59	
		847 60
Contribution to resthouse funds ...	—	4,500 0
Resthouse-keepers' pay, &c. ..	—	697 50
Miscellaneous	876 90	
Do. (cross entry) ...	1,070 19	
		1,947 9
Balance on December 31, 1886 ...	—	8,025 6
Total ...	—	72,015 31

District Road Committee,
Kalutara, March 17, 1887.

H. Hay Cameron,
Chairman

KEGALLA.

Receipts.		Amount. Rs. c.	Total. Rs. c.
Balance brought forward from 1885 ...		—	10,431 30
Commutation of 1886 ...		34,455 0	
Labour		7,101 0	
			41,556 0
Commutation of former years :—			
1885		426 0	
1884		138 0	
1883		108 0	
1882		21 0	
1881		39 0	
1880		12 0	
Labour		3,925 50	
			4,669 50
Resthouse collections ...		—	720 79
Miscellaneous		10,715 74	
Toll grant vote		2,315 80	
Government grant for tools ...		51 95	
Ruanwella Attanagalla road vote ...	5,000 0		
Less value of tools supplied by Provincial Road Committee ...	403 30		
		4,596 70	
			17,680 19
Total ...			75,057 78

Payments.		Amount. Rs. c.	Total. Rs. c.
To Director of Public Works, contribution to principal roads :—			
Cash		12,760 50	
Labour		433 50	
			13,194 0
Minor Roads			
Cash, 1886 ...	Rs. 4,706 21		
Arrears ...	„ 271 86		
		4,978 7	
Labour, 1886 ...	Rs. 6,292 50		
Arrears ...	„ 2,971 50		
		9,264 0	
			14,242 7
Toll Grant Roads			
Cash		1,933 56	
Labour, 1886 ...	Rs. 339 0		
Arrears ...	„ 36 0		
		375 0	
			2,308 56
Resthouses			
Pay of resthouse-keepers ...		908 33	
Contribution to resthouse funds ...		3,712 44	
Resthouse repairs and improvements		1,088 76	
Labour supplied to resthouses, 1886 .	Rs. 36 0		
Arrears ...	„ 918 0		
		954 0	
Construction of new resthouse at Mawanella		2,997 80	
			9,661 33
Establishment.			
District Road Committee ...		2,750 0	
Contribution to Provincial Road Committee		600 0	
Commission to collectors (on account of 1886's collections) ...		2,179 33	
Commission to collectors (on account of arrears 1886's collections)		1,947 12	
Compulsory labour centres ...		2,157 92	
Cost of tools from Government grant		51 95	
Stationery and printed forms ...		375 11	
			10,061 43
Miscellaneous		—	14,150 34
On account of Ruanwella-Attanagalla road		—	4,596 70
Balance ...		—	6,843 35
Total...		—	75,057 78

District Road Committee,
Kegalla, July 8, 1887.

F. H. Price,
Chairman.

RATNAPURA.

Receipts.		Amount. Rs. c.	Total Rs. c.
Balance on December 31, 1885 ...		—	8,386 9
Commutation of 1886 ...		21,401 0	
Labour		7,167 0	
			28,568 0
Commutation (arrears) ...		—	39 0
Toll grant		—	950 0
Resthouse Funds.			
Collections		1,369 49	
Remittance from Provincial Road Committee for expenditure on resthouses		6,027 96	
			7,397 45
Carried over...		—	45,340 54

Payments		Amount. Rs. c.	Total. Rs. c.
Principal Works.			
Commutation		5,385 50	
Labour		2,817 0	
			8,202 50
Minor Works.			
Commutation		6,724 41	
Labour		4,350 0	
			11,074 41
Toll Grant			
Amount expended		908 61	
Unexpended balance remitted to Provincial Road Committee ...		41 39	
			950 0
Carried over...		—	20,226 91

Receipts.	Amount. Rs. c.	Total. Rs. c.
Brought forward...	—	45,340 54
General Funds.		
Commission due to division officers of 1885, to be hereafter paid to them	3,094 62	
Undrawn salaries of resthouse-keepers and pay of overseers, labourers, &c.	698 91	
Amount due on contract for constructing Madampe resthouse, to be paid hereafter... ...	963 60	
Petty receipts	187 72	
		4,944 85
Total ...		50,285 39

Payments.	Amount. Rs. c.	Total. Rs. c.
Brought forward...	—	20,226 91
Resthouse Funds.		
Pay of resthouse-keepers ...	1,632 50	
Amount expended from remittance from Provincial Road Committee for upkeep and repairs, &c., to resthouses	5,578 88	
Amount unexpended on Pussella and Madampe resthouses, remitted to Director of Public Works and Provincial Road Committee	2,346 0	
		9,557 38
Establishment.		
District Committee... ...	—	1,660 66
Contribution to Provincial Road Committee.		
On account of establishment ...	600 0	
On account of fund for upkeep, &c. of resthouses	3,150 0	
		3,750 0
Charges incurred on account of Commutation and Labour.		
From commutation of 1886 :—		
Labour centres ...	782 0	
Printed forms and stationery	323 57	
Value of rails	234 38	
Superintendence ...	300 0	
Other charges and petty expenses	977 50	
		2,617 47
From commutation prior to 1886 :—		
Printed forms and stationery	250 58	
Tracing roads	892 7	
Commission to division officers	3,094 62	
Other charges and petty expenses	393 34	
		4,630 61
From General Funds.		
Commission due to division officers, 1885	2,632 84	
Amount due on contract for Madampe resthouse ...	963 60	
Salaries due to resthouse-keepers and pay of overseers and coolies	399 26	
Petty expenses	272 67	
		4,268 37
Balance on December 31, 1886 ...	—	3,573 99
Total ...		50,285 39

District Road Committee,
Ratnapura, December 31, 1886

H. Wace,
Chairman

SOUTHERN PROVINCE.

Statements showing the Amount of Labour performed and Money paid on account of each Division in the several Districts of the Southern Province, during 1886.

GALLE DISTRICT.

Number of Division.	Unexpended Balance of December, 31, 1885.	Arrears of Commutation of previous years collected during 1886.	Labour Perfomed.						Money Paid.				Total		Furnished to the Director of Public Works						For Minor Works, &c.					Amount in Cash.	Total
															In Labour						In Labour.						
			No. of men Six days.	Amount.	No. of men Twelve days	Amount.	No. of men Twenty-four days.	Amount	No. of men single.	Amount	No. of men double.	Amount.	No. of men.	Amount including balance of December 31, 1885.	No. of men Six days.	Amount.	No. of men Twelve days.	Amount.	In Cash.	Total.	No. of Men Six days.	Amount.	No. of Men Twelve days.	Amount	No. of men Twenty-four days.	Amount.		
	Rs. c.			Rs. c.		Rs.		Rs		Rs. c.		Rs		Rs. c.		Rs c		Rs	Rs. c	Rs. c.		Rs c		Rs		Rs.	Rs. c	Rs c.
1	0 65	—	229	343 50	9	27	3	18	762	1143 0	21	63	1024	1505 15	6	9 0	—	—	200 0	209 0	206	309 0	—	—	—	—	1006 65	1315 65
2	11 16	3 0	325	487 50	13	39	1	6	522	783 0	4	12	865	1341 66	137	205 50	—	—	200 0	405 50	188	282 0	4	12	—	—	609 16	903 16
3	12 94	—	340	510 0	30	90	7	42	658	987 0	16	48	1051	1689 94	28	42 0	—	—	100 0	142 0	311	466 50	15	45	—	—	947 94	1459 44
4	16 36	9 0	253	379 50	12	36	1	6	974	1461 0	15	45	1255	1952 86	138	207 0	9	27	400 0	634 0	115	172 50	—	—	—	—	1131 36	1303 86
5	2 55	—	416	624 0	6	18	5	30	506	759 0	7	21	940	1454 55	90	135 0	—	—	300 0	435 0	327	490 50	—	—	—	—	482 55	973 5
5½	0 75	—	235	352 50	3	9	5	30	713	1069 50	2	6	958	1467 75	212	318 0	1	3	300 0	621 0	23	34 50	—	—	—	—	776 25	810 75
6	1 7	24 0	151	226 50	3	9	—	—	658	987 0	7	21	819	1268 57	58	87 0	2	6	300 0	393 0	93	139 50	—	—	—	—	733 7	872 57
6½	6 13	6 0	129	193 50	3	9	—	—	792	1188 0	20	60	944	1462 63	111	166 50	—	—	344 0	510 50	16	24 0	—	—	—	—	916 13	940 13
7	44 54	—	510	765 0	16	48	5	30	711	1066 50	2	6	1244	1960 4	279	418 50	5	15	400 0	833 50	228	342 0	—	—	—	—	717 4	1059 4
8	0 21	—	1037	1555 50	40	120	10	60	250	375 0	26	78	1363	2188 71	214	321 0	—	—	50 0	371 0	822	1233 0	15	45	—	—	403 21	1681 21
9	3 22	18 0	1150	1725 0	38	114	10	60	327	490 50	21	63	1546	2473 72	179	268 50	—	—	100 0	368 50	964	1446 0	12	36	—	—	474 72	1956 72
10	7 94	3 0	882	1323 0	2	6	—	—	145	217 50	7	21	1036	1578 44	—	—	—	—	—	—	881	1321 50	2	6	—	—	249 44	1576 94
11	14 44	—	1032	1548 0	—	—	—	—	45	67 50	1	3	1078	1632 94	—	—	—	—	—	—	1032	1548 0	—	—	—	—	84 94	1632 94
12	15 50	—	213	319 50	21	63	—	—	473	709 50	5	15	712	1122 50	193	289 50	6	18	250 0	557 50	14	21 0	—	—	—	—	490 0	511 0
13	33 96	15 0	586	879 0	46	138	—	—	373	559 50	7	21	1012	1646 46	481	721 50	8	24	200 0	945 50	105	157 50	2	6	—	—	429 46	592 96
14	1 68	12 0	404	606 0	4	12	1	6	922	1383 0	23	69	1354	2089 68	329	493 50	3	9	300 0	802 50	71	106 50	—	—	—	—	1165 68	1272 18
15	110 86	27 0	559	838 50	5	15	2	12	403	604 50	37	111	1006	1718 86	239	358 50	—	—	338 0	696 50	320	480 0	—	—	—	—	515 36	995 36
16	86 40	36 0	297	445 50	15	45	13	78	420	630 0	29	87	774	1407 90	56	84 0	—	—	600 0	684 0	238	357 0	—	—	—	—	239 40	596 40
17	98 61	—	36	54 0	—	—	1	6	662	993 0	28	84	727	1235 61	31	46 50	—	—	400 0	446 50	—	—	—	—	—	—	775 61	775 61
18	309 49	33 0	415	622 50	18	54	19	114	605	907 50	32	96	1089	2136 49	87	130 50	—	—	400 0	530 50	316	474 0	16	48	—	—	945 99	1467 99
19	22 20	—	253	379 50	11	33	—	—	363	544 50	44	132	671	1111 20	251	376 50	5	15	300 0	691 50	—	—	—	—	—	—	398 70	398 70
19½	770 92	52 50	194	291 0	30	90	9	54	562	843 0	50	150	845	2251 42	138	207 0	2	6	350 0	563 0	50	75 0	—	—	—	—	1466 42	1541 42
20	653 77	9 0	719	1078 50	24	72	—	—	289	433 50	25	75	1057	2321 77	343	514 50	1	3	325 75	843 25	341	511 50	26	78	—	—	845 52	1435 2
21	51 30	27 0	511	766 50	—	—	—	—	302	453 0	13	39	826	1336 80	374	561 0	—	—	250 0	811 0	130	195 0	21	63	—	—	320 30	578 30
	a	a	a	a	86	258	5	30	—	—	—	—	91	288 0	—	—	—	—	—	—	119	178 50	293	879	107	642	—	1699 50
22	24 18	27 0	596	894 0	13	—	10	60	414	621 0	18	54	1051	1729 18	—	—	—	—	—	—	588	882 0	—	—	—	—	736 18	1618 18
	2310 83	301 50	11472	17208 0	448	1344	107	642	12851	19276 50	460	1380	25338	42462 83	3974	5961 0	42	126	6407 75	12494 75	7498	11247 0	406	1218	107	642	16861 8	29968 8

MATARA DISTRICT.

Number of Division.	Unexpended balance of December 31, 1885, less outstanding liabilities of 1885 expended in 1886.	Arrears of Commutation of previous years collected during 1886.	Labour Performed.				Money Paid.						Total.		Furnished to the Director of Public Works.						Furnished for Minor Roads, &c.						Balance unexpended.
			No. of men single labour.	Amount.	No. of men double labour.	Amount.	No. of men single labour.	Amount.	No. of men double labour.	Amount.	In lieu of extra labour. No. of men.	In lieu of extra labour. Amount.	No. of men.	Amount including balance of December 31, 1885	In Labour. No. of men single.	In Labour. Amount.	In Labour. No. of men double.	In Labour. Amount.	Amount in Cash.	Total.	In Labour. No. of men single.	In Labour. Amount	In Labour. No. of men double.	In Labour. Amount.	Amount. in Cash.	Total.	
	Rs. c.	Rs. c.		Rs. c.		Rs c.		Rs. c.		Rs c		Rs. c.		Rs. c		Rs. c		Rs. c.	Rs. c.	Rs. c		Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.
1	102 0	18 0	627	940 50	4	12 0	1139	1708 50	48	144 0	85	57 75	1903	2982 75	366	549 0	—	—	800 0	1349 0	261	391 50	4	12 0	1100 0	1503 50	130 25
2	103 50	54 0	767	1150 50	20	60 0	1570	2355 0	109	327 0	55	36 25	2521	4086 25	657	985 50	8	24 0	1000 0	2009 50	110	165 0	12	36 0	1610 0	1811 0	265 75
3	147 50	39 0	789	1183 50	24	72 0	2075	3112 50	92	276 0	110	69 50	3000	4900 0	695	1042 50	22	66 0	1000 0	2108 50	94	141 0	2	6 0	2350 0	2497 0	294 50
4	102 50	9 0	803	1204 50	14	42 0	1476	2214 0	58	174 0	30	21 0	2381	3767 0	747	1120 50	10	30 0	1000 0	2150 50	56	84 0	4	12 0	1220 0	1316 0	300 50
5	107 50	24 0	330	495 0	7	21 0	1127	1690 50	26	78 0	25	20 25	1515	2436 25	327	490 50	7	21 0	500 0	1011 50	3	4 50	—	—	1270 0	1274 50	150 25
6	82 50	36 0	383	574 50	4	12 0	974	1461 0	47	141 0	85	56 75	1493	2363 75	51	76 50	—	—	500 0	576 50	332	498 0	4	12 0	1090 0	1600 0	187 25
7	43 0	30 0	378	567 0	11	33 0	957	1435 50	19	57 0	36	18 50	1401	2184 0	—	—	—	—	500 0	500 0	378	567 0	11	33 0	940 0	1540 0	144 0
8	129 0	39 0	115	172 50	—	—	1130	1695 0	44	132 0	37	27 0	1326	2194 50	—	—	—	—	500 0	500 0	115	172 50	—	—	1320 0	1492 50	202 0
9	165 0	24 0	488	732 0	2	6 0	1252	1878 0	45	135 0	30	20 0	1817	2960 0	305	457 50	1	3 0	500 0	960 50	183	274 50	1	3 0	1525 0	1802 50	197 0
10	54 50	9 0	239	358 50	3	9 0	965	1447 50	59	177 0	—	—	1266	2055 50	215	322 50	3	9 0	500 0	831 50	24	36 0	—	—	1050 0	1086 0	138 0
11	45 50	18 0	214	321 0	4	12 0	801	1201 50	41	123 0	—	—	1060	1721 0	124	186 0	2	6 0	295 50	487 50	90	135 0	2	6 0	960 0	1101 0	132 50
12	101 0	102 0	885	1327 50	5	15 0	1308	1962 0	147	441 0	115	71 75	2460	4020 25	166	249 0	4	12 0	1000 0	1261 0	719	1078 50	1	3 0	1520 0	2601 50	157 75
13	56 51	33 0	347	520 50	8	24 0	850	1275 0	126	378 0	17	10 25	1348	2297 26	84	126 0	4	12 0	500 0	638 0	263	394 50	4	12 0	1146 55	1553 5	106 21
	1240 1	435 0	6365	9547 50	106	318 0	15624	23436 0	861	2583 0	625	409 0	23581	37968 51	3737	5605 50	61	183 0	8595 50	14384 0	2628	3942 0	45	135 0	17101 55	21178 55	2405 96

HAMBANTOTA DISTRICT.

1	227 20	283 50	5	7 50	—	—	1370	2055 0	84	252 0	—	—	1459	2825 20	5	7 50	—	—	358 77	366 27	—	—	—	—	2448 93	2448 93	10 0
2	542 45	166 64	309	463 50	46	234	1495	2242 50	194	582 0	—	—	2044	4231 9	30	45 0	46	234 0	1000 0	1279 0	279	418 50	—	—	2503 59	2922 9	30 0
3	423 16	583 0	3111	4666 50	163	678	1443	2164 50	193	579 0	—	—	4910	9004 16	776	1164 0	86	447 0	1000 0	2611 0	2335	3502 50	77	231 0	2700 66	6443 16	40 0
4	764 47	150 50	1964	2946 0	59	288	901	1351 50	9	27 0	—	—	2933	5527 47	—	—	37	222 0	500 0	722 0	1964	2946 0	22	66 0	1753 47	4765 47	40 0
5	264 71	172 30	304	456 0	—	—	1069	1603 50	188	564 0	—	—	1561	3060 51	—	—	—	—	500 0	500 0	304	456 0	—	—	2064 59	2520 59	39 92
	2221 99	1355 94	5693	8539 50	268	1200	6278	9417 0	668	2004 0	—	—	12907	24738 43	811	1216 50	169	903 0	3358 77	5478 27	4882	7323 0	99	297 0	11480 24	19100 24	159 92

Statement showing the Appropriation of Labour and Money in the Southern Province, during 1886.

GALLE DISTRICT.	In Labour.		In Money.		Total.	
	Rs	c.	Rs.	c.	Rs.	c.
Principal Roads.						
Road from Bentota to Goiyapana ...	4,510	50	4,006	75	8,517	25
Road from Galle Gravets to Imaduwa ...	777	0	1,318	50	2,095	50
Road from Dodanduwa to Baddegama ...	799	50	200	50	1,000	0
For Resthouses ...	—		882	0	882	0
Minor Works, &c.						
Wakwella to Gintota ...	157	50	153	0	310	50
Municipal limits to Wakwella ...	187	50	101	64	289	14
Municipal limits to Poddella ...	226	50	65	0	291	50
Hirimbure to Baddegama ...	685	50	167	26	852	76
Magalla to Kurunduwatta ...	513	0	346	50	859	50
Hapugala to Uluwitike ...	67	50	65	0	132	50
Bope Watureke ...	27	0	15	0	42	0
Kitulampitiya to Hapugalla ...	78	0	85	0	163	0
Kitulampitiya to Batuwantuduwe ...	105	0	45	0	150	0
Morris road to Bataduwa ...	75	0	202	48	277	48
Akmimana to Pinneduwa ...	159	0	64	50	223	50
Sandrawala to Wanduramba ...	265	50	165	0	330	50
Wakwella to Sandrawala ...	—		38	0	138	0
Halpatota to Kurundugaha ...	537	0	95	0	632	0
First section of Ganegoda road ...	499	50	126	75	626	25
Second section of Ganegoda road .	589	50	202	48	791	98
Towing path ...	381	0	73	32	454	32
Baddegama to Nagapamulla ..	213	0	8	22	221	22
Bridge at Kiembe ella ...	6	0	564	0	570	0
Bridge at Galbendedolla ..	—		108	0	108	0
Nagoda to Udelematta .	397	50	4	32	401	82
Rattan bridges ..	195	0	13	50	208	50
Third section of Ganegoda road ...	430	50	30	0	460	50
Hiniduma to Opata...	250	50	21	0	271	50
Hiniduma to Dollewe .	346	50	21	0	367	50
Blasting rocks in Gin-ganga .	—		99	0	99	0
Hiniduma to Deniyaga ...	201	0	30	0	231	0
Akmimana to Walawe ...	237	0	95	0	332	0
Walawe to Imaduwa ...	109	50	99	25	208	75
Ahangama to Imaduwa, on account of 1885 ...	252	0	172	0	424	0
Borale road	36	0	20	0	56	0
Yakkelamulla to Korehane ...	145	50	105	0	250	50
Angulugaha to Kottawa ...	42	0	6	75	48	75
Unawatuna to Hinetigalla ...	172	50	50	0	222	50
Pihane to Habaraduwa ..	177	0	60	0	237	0
Road from Kotukurunde to Angulugaha ...	467	50	105	64	473	14
Bridge at Madola	—		339	41	399	41
Ratgama to Dodangoda ...	588	0	222	50	810	50
Madampe to Gonapinuwela ..	340	50	130	48	470	98
Hikkaduwa to Gonapinuwela ...	153	50	60	40	213	90
Kahawe to Batapola ..	238	50	71	0	309	50
Randomba to Ambalangoda ...	78	0	25	0	103	0
Ambalangoda to Elpitiya ...	1,015	50	430	52	1,446	2
Old street at Bentota ..	52	50	—		52	50
Circular road at Bentota ..	331	50	127	75	459	25
Bentota to Uragaha ...	456	0	120	0	576	0
Kosgoda to Hipankanda ...	376	50	128	0	504	50
Hipankanda to Elpitiya .	193	50	65	0	258	50
Elpitiya to Pitigalla ...	444	0	114	0	558	0
Bridge at Dedduwa ..	—		140	0	140	0
Minor resthouses ...	124	50	124	93	249	43
Madampe canal ...	—		50	0	50	0
Elkandura new road and Dewature road ...	491	50	191	26	682	76
Bridlepath at Hiniduma ...	12	0	9	0	21	0
Wakwella bridge	—		61	0	61	0
Deduwe causeway	78	0	—		78	0
Establishment's salary, &c. ...	—		—		3,425	82
Salary of the Superintendent of Minor Works ...	—		—		2,500	0
Horse allowance of do. do. ...	—		—		600	0
Salary of the Head Overseer ...	—		—		480	0
Commission to District Officers and Provincial Officers	—		—		958	15
Travelling allowance to Mudaliyars ...	—		—		93	35
Cost of printed forms and stationery ...	—		—		699	30
Salaries of the resthouse-keepers ...	—		—		612	50
Value of resthouse articles ...	—		—		747	70
Miscellaneous, &c	—		—		650	40
Total ...	—		—		42,462	83

	In Labour.		In Money.		Total	
	Rs.	c.	Rs	c	Rs	c
MATARA DISTRICT						
Goiyapana to Kemogoda	4,036	50	3,970	50	8,007	0
Matara to Hakmana	1,039	50	1,702	0	2,741	50
Imaduwa to Wiharahena	661	50	800	0	1,461	50
Principal resthouses	51	0	2,000	0	2,051	0
Ventilation of cesspits attached to resthouses ...			123	0	123	0
Establishment	-		2,280	0	2,280	0
Commission to Division Officers	-		4,646	42	4,646	42
Expense of collection of arrears of past years ...	—		139	50	139	50
Pay of resthouse-keepers	—		1,597	0	1,597	0
Contingencies	-		484	63	484	63
Pay of Superintendent of Minor Roads ...	-		1,999	92	1,999	92
Travelling allowance to Do ...	—		720	0	720	0
Travelling allowance to Unofficial Members of the District Road Committee	—		50	0	50	0
Printed forms	-		250	0	250	0
Cost of tools	-		739	29	739	29
Contribution towards salary of the Provincial Road Committee's clerk	—		20	0	20	0
Dondra streets	19	50	139	49	158	99
Dikwella to Dematapitiya	48	0	218	0	266	0
Medawatta to Hunriadeniya	270	0	49	71	319	71
Hakmana to Pottewela	79	50	207	45	286	95
Hakmana to Pananwela	198	0	197	93	395	93
Hakurana to Kamburupitiya	58	50	167	75	226	25
Kotapola to Beralapanatara	168	0	160	40	328	40
Kotapola bridge	—		566	0	566	0
Kamburupitiya to Urubokka	85	50	379	11	464	61
Tihegoda to Akuressa	604	50	0	30	604	80
Polwatta to Akuressa, including Murtettuwattaroad	1,015	50	—		1,015	50
Matara to Telijjawila	292	50	17	35	309	85
Borala road	165	0	81	96	246	96
Weligama streets	111	0	1	15	112	15
Nanuara road	36	0	312	90	348	90
District road, Morowak korale	—		250	0	250	0
Madihe road	-		241	49	241	49
Kirinde to Tumbe	247	50	602	49	849	99
Madawala road	—		30	0	30	0
Aparekka road	669	0	329	0	998	0
Gansabhawa roads	—		80	0	80	0
Resthouses on minor roads	9	0	142	31	151	31
HAMBANTOTA DISTRICT.						
Principal Roads and Resthouses.						
Road from Kemagoda to Hambantota ...	2,112	0	2,650	0	4,762	0
Road from Hambantota to Bundala ...	7	50	492	50	500	0
Repair of Resthouses	—		206	27	206	27
Pay of Resthouse-keepers	—		810	0	810	0
Minor Roads and Works						
Road from Tangalla to Taraperiya	1,098	0	646	92	1,744	92
Road from Pussella to Kaluwana	2,347	50	954	26	3,301	76
Road from Ranna to Walasmulla	634	50	225	0	859	50
Road from Tangalla to Wiraketiya	889	50	301	50	1,191	0
Road from Marakolla to Walgameliya ...	145	50	69	50	215	0
Jungle paths of West Giruwa pattu ...	1,738	50	392	91	2,131	41
Roads and paths of east Giruwa pattu ...	766	50	334	7	1,100	57
Roads and paths of east Magam pattu ...	—		719	13	719	13
Repair of ambalams	—		500	0	500	0
Sea wall works at Tangalla	-		3	75	3	75
Non-effective Charges.						
Salaries, Office Establishment	—		1,181	68	1,181	68
Pay and allowance of Superintendent of Minor Roads	—		1,346	64	1,346	64
Commission to division officers	..		2,236	51	2,236	51
Contingencies	—		785	79	785	79
Subsistence to labourers under clause 23 of Ordinance No. 31 of 1884..	-		982	58	982	58

Provincial Road Committee's Office,
Galle, July 18, 1887.

E. ELLIOTT,
Acting Chairman.

XIV.—1887.

REPORTS

ON THE

CELEBRATION OF HER MAJESTY'S JUBILEE IN CEYLON.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

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REPORT.

THE Executive Committee commenced their work by placing themselves in communication with the District Committees throughout the Island, and for this purpose they addressed a circular letter (copy appended, marked A) to the Government Agents and Assistant Government Agents at the various stations, and subsequently forwarded to the District Committees forms of subscription lists, which they recommended should be used for the purpose of the collection of subscriptions for the various objects had in view, viz., Local Festivities, Local Ceylon Memorial, and Imperial Institute (Copy of this form of subscription list is appended hereto, marked B.) In some few cases the District Committees preferred to make use of subscription lists prepared in a form designed by themselves; but, as a rule, the form suggested by the Executive Committee was adopted.

2. The collection of subscriptions for the Ceylon Permanent Memorial was much retarded, and the amount probably considerably lessened, owing to the difficulty experienced by the General Committee in deciding on the form that this memorial should take; and it was only on the 30th May that it was finally decided by a majority of that Committee that a "Home for Incurables," to be called the "Victoria Home for Incurables," should be established in Colombo, for the care of those suffering from incurable diseases throughout the Island.

3. Of the nineteen District Committees, twelve expressed their willingness to contribute to this object. The remainder preferred to devote the sums collected by them (under the head Ceylon Permanent Memorial) to some work or object more immediately connected with their particular district.

4. A Special Committee has been appointed to carry out the work connected with the establishment of the "Home for Incurables," and they have already taken steps to that end, and have been greatly assisted by the action of Government, in having offered a portion of the buildings lately used as a Lunatic Asylum for the purposes of the Home.

5. In some instances, District Committees have resolved to secure a permanent local memorial, and many private individuals have given liberally for a similar object.

6. The Executive Committee regret that they are unable to give a full list of these local memorials, the necessary information not having as yet been received, but they would, however, mention the following:—

Romanis Peries, Esq.: a Drinking-fountain at the Wharf, Colombo.
Mrs. S. T. Muttiah: R1,000 for a Jubilee Medal for a Scholarship in St. Thomas' College.
Mrs. S. T. Muttiah: R400 for enclosure wall round St. James' Church.
The Planting Community: Victoria Room, Planters' Wards, at the Colombo Hospital.
Galle: Public Park.
Negombo: a Clock Tower.
C. J. R. Le Mesurier, Esq.: provide Waterworks for Nuwara Eliya.

7. With a few exceptions, the response of the District Committees to the overtures of the Executive Committee was extremely gratifying. The District Committees vied with one another in the energy of their preparations and in the cordiality of their co-operation with the Executive Committee, and the Executive Committee desire to record their grateful acknowledgment of the assistance they have received from the Chairmen, Honorary Secretaries, and other members of those Committees, as well as their warm appreciation of the support that the demonstration met with from the public at large.

8. A record of the principal events of Her Majesty's reign, prepared by His Excellency the Governor, and translated into Sinhalese and Tamil, was read on the 28th June at about 700 different centres in the Island. It was read by the Governor at Colombo, by the Government Agents and the Assistant Government Agents at the principal stations, and by the Headmen in their districts, to large and enthusiastic crowds of the people. Pavilions were erected for the accommodation of those who read the record, and for others, and the Committees and the people vied with one another in the matter of decorations. Thousands of copies of the record in English and in the native languages were distributed to the people. (A copy is annexed to this report, marked C.)

9. On the same day the occasion was celebrated throughout the Island by public rejoicings, &c. In Colombo, Kandy, Galle, and Trincomalee the troops in garrison were paraded, and fired *feux-de-joie*; public prayers and thanksgivings were offered in places of worship; the poor were fed and clothed; processions were formed; odes composed for the occasion were recited; loyal addresses were presented; and the festivities concluded with illuminations, bonfires, and fireworks.

10. Royal salutes of fifty guns were fired at Colombo and Trincomalee.

11. The Executive Committee is unable to arrive at even an approximate idea of the number of people who took part in the celebration throughout the Island. Some of the Government Agents and District Committees have given rough estimates of the number that were present; but most have omitted to do even this. It is, however, certain that unusually large crowds were collected, alike in the small as in the large towns, as also in the villages chosen as local centres in the country; and that the aggregate must have been very large. And it is extremely gratifying to know that the proceedings were in all cases conducted in the most orderly as well as in the most enthusiastic manner.

12. An Address to Her Majesty from all the inhabitants of Ceylon was prepared and submitted to the General Committee for ratification, and has since been circulated for signatures, and largely signed.

13. A beautifully illuminated copy of the Address has been prepared by Mr. J. K. L. Vandort, a local artist, and a casket to contain the same is now in course of being made.

14. The design of the casket (also the work of Mr. Vandort) is characteristic of Ceylon. The chief features are three caparisoned and kneeling elephants, bearing on their backs howdahs containing karanduwas set with gems, and presenting on their tusks a silver cylinder for the reception of the Address. The base is formed of ebony, and supported by feet of silver.

15. The Executive Committee have much pleasure in announcing that Ceylon is now in a position to make a contribution of R10,000 for the Imperial and Colonial Institute, and that a sum of R12,081·16, to form a nucleus of a fund for the relief of those afflicted with incurable diseases, has been made available by the contributions of the people of Ceylon; and the Committee believe that it would be difficult to have selected as a Permanent Memorial of Her Majesty's Jubilee an object more gratifying to a Sovereign whose sympathies are always with the poor and the afflicted.

16. Including a contribution by Government of R5,000, the subscriptions that have been made to the fund of which the Executive Committee have had charge, amount to the sum of R37,347·05. Of this the following sums have been subscribed specially, as given below:—R2,064·43½ for Colombo Festivities; R8,270·73 for Ceylon Permanent Memorial; R6,899·63½ for the Imperial and Colonial Institute.

A sum of R11,494·88 has been placed by the subscribers at the disposal of the Executive Committee to be used as they may consider advisable. To this must be added the Government contribution of R5,000, and a sum of R3,617·37, the proceeds of sale of material and rent of pavilions, making a total sum of R20,112·25 at the disposal of the Executive Committee. The net expenditure on the local celebration in Colombo amounted to R12,865·89.

17. Deducting the amount of the expenditure from the total receipts as above—viz., R37,347·05—a balance of R24,481·16 is available for distribution by the Executive Committee. From this a sum of R1,500 is reserved to meet cost of casket for the Address, and for any charges that may not already have been preferred. A further sum of R900 has been voted by the Committee to Captain Gwatkin, the Secretary, and Mr. Tomalin, the Architect, as a mark of appreciation for the valuable services rendered by them.

18. The Committee has decided to distribute the balance—*i.e.*, R22,081·16—in the following manner: R10,000 for the Imperial Institute; R12,081·16 for the Victoria Home for Incurables.

19. In addition to the above amount voted for the Home for Incurables, the Committee has, since these accounts were prepared, been informed by the Chairman of the Local Jubilee Committee of Kurunégala, that a sum of R1,500 will be paid over to the governing body of the Home for Incurables as a contribution from the people of Kurunégala, on the reasonable condition that the right of the people of that district to participate in the advantages of the Home, and to maintain free of cost a certain number of patients in it, is recognised.

20. The Committee append hereto a statement of accounts of receipts and expenditure to date, prepared by Mr. Moir, who has kindly given his services as Honorary Treasurer.

Colombo, Ceylon, August 1, 1887.

W. H. RAVENSCROFT,
Chairman, Executive Jubilee Committee.

The Honorary Treasurer, Jubilee Fund, in account with the Executive Committee.

	R. c.	R. c.
Subscriptions for Local Festivities	1,739 43½	
Subscriptions for Local Memorial	7,443 86	
Subscriptions for Imperial Institute	5,349 63½	
Subscriptions to be apportioned by the Committee... ...	11,494 88	
		26,027 81
Fees for pandals	1,400 0	
Sale of lamps	1,087 0	
Sale of tickets	548 0	
Sale of materials	582 37	
		3,617 37
Refund of advances ...	—	36 42
Total ...		29,681 60

	R. c.	R c.
Cost of pandals ...	—	5,629 25
Cost of decorations ...	—	1,614 72
Cost of illuminations ...	—	3,297 98
Cost of fireworks ...	—	1,010 0
Laying on water ...	—	90 0
Engrossing the Address ...	—	150 0
Cost of grants to outstations ...	—	615 0
Cost of miscellaneous charges, viz. :—		
Pay of clerk	140 0	
Pay of bookbinder ...	3 25	
Pay of ticket collectors ...	12 0	
Cost of stationery ...	96 11	
Cost of stamps ...	7 25	
Cost of printing ...	17 0	
Cost of advertising ...	99 61	
Telegrams ...	10 22	
Cheque books ...	3 75	
Carriage hire ...	7 75	
		396 94
Advances since founded ...		36 42
Refunds for pandals ...	50 0	
tickets ...	5 0	
lamps ...	7 0	
		62 0
		12,902 31
Balance ...		16,779 29*
Total ...		29,681 60

R. W. D. MOIR,
Honorary Treasurer.

Colombo, August 2, 1887.

	R. c.
* Balance of cash account ...	16,779 29
Add cheques uncashed ...	649 98
Balance of Pass Book ...	17,429 27

APPENDIX.

A.—Circular to District Committees.

Executive Committee, Colombo, March 8, 1887.

SIR,—AT a Meeting of the Executive Committee appointed to make arrangements for the celebration of Her Majesty's Jubilee, and for the collection of subscriptions to defray the expenses of the local rejoicings and for permanent Memorials in commemoration of the occasion, held at Colombo on the 2nd instant, it was resolved that communications be addressed to the Government Agents and Assistant Government Agents, with a view to ascertain the steps that it is proposed by them to take for the furtherance of the above objects. And in accordance with this resolution, I am directed to request you to be so good as to afford me information on the following points :—

1.—The names of the gentlemen appointed to act as Sub-Committees in each of the towns and villages of your province or district at which it is proposed to make arrangements for a local celebration of Her Majesty's Jubilee on June 20, or on such other day as may be hereafter decided.
2.—The form in which it is proposed to carry out the celebration.
3.—An approximate estimate of the cost
4.—An approximate estimate of the amount that may be expected to be raised locally to defray the expenses of the local celebration on June 20
5.—Whether fireworks can be obtained locally in sufficient quantities, and if not so obtainable, a statement of the quantity of each description required.

The great object being to make the rejoicings as universal as possible, it is manifest that it is necessary that each district or place should rely on its own resources for the proper commemoration of the auspicious event At the same time it is recognised that in some places there may be a difficulty, not from want of willingness, but from want of means on the part of the people, to subscribe the required sum ; and I am therefore directed to inform you that, on receipt of information on the points above mentioned, the question of a small grant in aid of the expenses of the celebration in such localities will be considered by the Executive Committee

It is understood by the Executive Committee that it is the intention of His Excellency the Governor to direct that a record of the principal events that have occurred during the reign of Her Majesty be publicly read at as many points as possible on June 20. This, with the attendant ceremonies, will, it is presumed, be the central feature of the rejoicings at each point.

In deciding on the other arrangements, the wishes of those who may subscribe with money, materials, or labour, will no doubt be the leading consideration : but the Executive Committee desire me to suggest, and to commend, for the consideration of the Local Committees, the following, as some of, perhaps, the most suitable modes of bringing the occasion home to the minds of the people :—

(*a*) The feeding of the poor of the town or village, and of those who may come in from distant places for the purpose of being present at, and taking part in, the rejoicings. (It has been suggested that there are many well to do people to whom this mode of celebrating the occasion would commend itself as peculiarly appropriate, and it is probable that in many cases donations of uncooked rice and other articles of food would be willingly given.)
(*b*) Fireworks
(*c*) Illuminations
(*d*) Bonfires, or beacons on hills or high points in the neighbourhood.

The question of the collection of subscriptions was discussed at the General Meeting held on the 1st instant, and it was decided that it is advisable to defer the active canvassing for subscriptions until the form that the Ceylon Permanent Memorial shall take has been decided. This question has been referred to a special Sub Committee for consideration, and I am directed by the Executive Committee to ask you to defer any active steps for the collection of subscriptions until the question has been settled, and until the General Committee have decided upon the form in which subscription lists shall be issued. On these points information will be afforded to you at the earliest possible date.

The Committee purpose, if you have no strong objection thereto, to place themselves in direct communication with the Assistant Government Agents at outstations, in order to save time, and because, though the Assistant Government Agents will no doubt be the Chairmen of the Local Sub-Committees, it is desired not to allow the proceedings to appear to be entirely of an official character.

I am, &c.,

G. L. GWATKIN,
Secretary, Jubilee Committee

B.—Form of Subscription List.

HER MAJESTY QUEEN VICTORIA'S JUBILEE FUND, CEYLON.

Subscribers may apportion their Subscriptions under one or more of the headings, or enter the amount under column 5, leaving the apportionment to the Executive Committee.

1 Name of Subscriber.	2 For Local Festivities.	3* For Local Permanent Memorial.	4 For Imperial Institute.	5 See Note above.
	R. c.	R. c.	R. c.	R. c.

* Decided by the General Committee that the Memorial shall be a Home for Incurables in Colombo.

C.—Record of Principal Events of Her Majesty's Reign.

On June 20, 1837, William the Fourth, King of England and Hanover, died at Windsor, and was succeeded on the throne of England by his Niece, Victoria, daughter of Edward, Duke of Kent. Only a man could succeed to the throne of Hanover, which consequently passed to the late King's brother, the Duke of Cumberland, and England was thus relieved from connection with a petty State, on the Continent of Europe,— a connection which for one hundred and twenty years had often proved no small embarrassment to the larger Kingdom This benefit, unconsciously and involuntarily conferred at the moment of her Accession, may be said to have been the first in the long list of services which Her Majesty has during the last half century rendered to her country.

On June 28, 1838, Her Majesty was solemnly crowned in Westminster Abbey.

The first two years of Her Majesty's reign were marked in the Western Hemisphere by a rebellion in Canada, and in the East by the invasion of Afghanistan by her Majesty's Indian troops.

The rebellion in America was speedily quelled, and the grievances which led to it were promptly redressed. The invasion of Afghanistan, though it led to unhappy results, was for the time brilliantly successful The former Ruler of the country was removed a prisoner to India, and a formerly deposed King restored to the throne, under British protection.

Towards the end of 1839 a system of cheap and uniform Postage Rates, which has been attended by the most important and unexpected results, was adopted in Great Britain, and has been imitated throughout the whole civilised world.

On the first day of the following year the great island of New Zealand was proclaimed a British Colony.

In February, 1840, the Queen married her cousin, Prince Albert, of the ancient Ducal House of Saxe-Coburg Gotha ; and before the close of the same year her first child, the Princess Royal, was born.

Her eldest son, the Prince of Wales, was born on November 9 in the following year.

At the close of 1841, and beginning of 1842, reverses were experienced by Her Majesty's troops in Afghanistan, an insurrection at Cabul having led to its evacuation by the army stationed there, and to the total destruction of that force in the formidable mountain passes between that place and India. A few months only, however, elapsed before Her Majesty's victorious armies had again swept over the country, which, after conquest, it was deemed judicious to abandon.

In 1842, also, a war with China, commenced in 1840, was brought to a successful issue by the Treaty of Nankin.

In 1844 laws were passed for the better protection of those working in Factories and Mines, which were themselves productive of much good, and were but the commencement of much subsequent legislation in the same direction

In 1845 another serious war occurred in India. The Sikhs of the Punjaub, without provocation, invaded the British Territory. The Punjaub was, in its turn, invaded by the Queen's forces, and, after some hard fighting in several pitched battles, was completely conquered. Instead of taking possession of it herself, the Queen restored the greater part of it to its boy-Maharajah, an English Regency being established at Lahore to guide and advise his actions

In that year a very grave calamity occurred in the British Islands, which had a great effect on subsequent events The potato crop of Ireland, on which the inhabitants of that island were dependent for food, failed. Laws removing all restrictions on the importation of grain were made, which had the effect of greatly reducing the price of food, and which, though they could not at the moment prevent famine in Ireland, have effectually hindered its recurrence, and produced lasting and beneficial changes throughout Great Britain. The great Minister who introduced these measures, Sir Robert Peel, succeeded in carrying them ; but they gave so much dissatisfaction to those who had previously supported him, that he had to retire from power

The first ten years of the Queen's reign were completed in 1847. They had been years of peace in Europe. Twice, indeed, danger of collision with France had arisen, but had been averted. On the whole, too, with the exception of the Irish Famine, they were years of prosperity. Many and great changes were effected in their course Railways, of which there was but one open for passenger traffic in England in 1837, had by 1847 spread all over Great Britain ;—Steamboats, which were few in number, and, with few exceptions, used only for coasting, or river voyages, in 1837, were in 1847 crossing the Atlantic to the United States and the West Indies ;—the Overland Route to India had been adopted instead of the tedious voyage round the Cape ;—Photography, invented about the date of Her Majesty's Accession, was annually improved ;—the Electric Telegraph, used first on the Great Western Railroad in 1838, was gradually brought into general employment by the public. A great social change, too, is marked by the fact that the practice of duelling, still usual at the time of Her Majesty's Accession, had by 1847 become wholly obsolete.

The events of the next decade were more stirring, though perhaps not more important. In 1848 a Revolution occurred in France, which drove the King from the throne, and converted that Monarchy into a Republic. The contagion of the Revolution spread throughout Europe, and violent movements took place, which shook, where they did not overthrow, the thrones of many Continental Sovereigns.

England almost alone remained unmoved. There can be no doubt that the personal character of the Sovereign, and the respect and attachment felt for Her Majesty, did much to confirm the people in their all but unanimous determination to uphold the existing Constitution. A ludicrously impotent attempt at insurrection in Ireland was firmly, but mildly, repressed, and during the next twenty years order prevailed and material prosperity increased to a degree unusual in that part of the United Kingdom.

In 1849 a rebellious Military Outbreak occurred in the Punjaub, which led to the destruction of the Sikh army, the reconquest of the country, and its annexation to Her Majesty's Dominions.

In 1850 the Queen had the misfortune to lose, by an accidental death, the services of one of the foremost of her Statesmen, Sir Robert Peel. Though not holding office when he died, he exercised a great and beneficial influence on public affairs, and, had he lived a short time longer, could unquestionably have returned to power as the Queen's Prime Minister.

In 1851 the first great International Exhibition was opened in Hyde Park. Many others have since followed, but they all owe their origin to that called into existence by Prince Albert, to whom the suggestion of the enterprise was due, and who had the sagacity to perceive the certainty of its success, which to many appeared highly doubtful.

In the same year, discoveries of gold were made in the Australian Colonies, which caused a rapid increase in their population and wealth.

In 1852 the great soldier, Arthur, Duke of Wellington, died at an advanced age, and was buried with much pomp in St. Paul's Cathedral. No other Englishman of this century has filled a similiar position, or obtained in equal measure the respect and deference of the whole country from the Queen downwards.

In this year a large part of Burmah was, after a short war, ceded to Great Britain.

In 1854 negotiations, which had for many months been carried on with respect to the relations between Russia and Turkey, ended in war between Russia and England, and the Queen's troops, in concert with those of France and Turkey, invaded Russia and laid siege to Sebastapol This siege lasted far on into the following year, but at length Sebastapol was taken on September 8, 1855 ; and in the spring of 1856 peace between England and France and Russia was restored.

In the same year, the Kingdom of Oudh was, in consequence of the continued and incorrigible misgovernment of its rulers, occupied and added to Her Majesty's Dominions in India.

So closed the second decade of Her Majesty's reign.

It had been marked by great events:—by the disturbance of European order, without disturbance in England;—by one great European war, in which England had been victorious;—by one great triumph of the arts of peace, in the inauguration of the Exhibition of 1851;—and by great additions of territory in India. Throughout its course there had been a steady growth of Railroads over the whole of Europe. The application of Steam to navigation had at its close been carried so far, that, whereas in 1847 only a few ships in the Royal Navy possessed steam power, in 1857 few were without it; while, not only had lines of packet steamers largely multiplied, but steam was largely used in the propulsion of vessels used for the ordinary purposes of commerce. At the same time the rapidly extending use of Electric Telegraphs, and their conveyance under water to the Continent, had enormously increased facilities for the communication of intelligence.

In the course of these ten years powers of self-government were conferred on the Australian Colonies, similar to those which had been previously conferred on Canada.

The mutterings of disaffection and coming storm in India were scarcely listened to in Europe in the beginning of 1857; but in the month of May of that year there broke out the great Indian Mutiny, which for a time gained fearful ascendency in the North and Centre of India. Terrible as those days were, they brought to light heroism and endurance on the part of English men and English women, of which their country may be proud, and displayed the fidelity, under severe trial, of many a Native Prince and peasant. Within a year, the skill of British Generals and the valour of British Armies had quenched this conflagration, and placed the Queen's supremacy and power in India on a firmer basis than ever before; and on January 1, 1859, the Sovereignty which, though her's in fact, had till then nominally been exercised by the East India Company, was avowedly transferred to the Queen.

Just before the Mutiny, war had arisen between England and China. Its prosecution was suspended until order was restored in India; but as soon as attention could be again bestowed on them, the operations in China were resumed and carried to a successful issue by a treaty which opened that Empire to English Commerce. Access to Japan, also, was for the first time obtained for foreigners by Lord Elgin, the negotiator of the Chinese Treaty.

In 1859 a war on the Continent of Europe, between France and Austria, led to great political changes, and the diminution of Austrian power in Italy, which in the following year, 1860, was, with the exception of Venice and Rome, practically united into one Kingdom. In these commotions England was, happily, not involved; but the apprehension that she might be so, gave rise to the very remarkable Volunteer Movement of 1859,—a movement which shows no signs of flagging, and which has become a recognised feature of English life.

In 1860 a fresh war with China led to the capture and destruction of the Imperial Palace by the English and French forces, and the conclusion of a treaty, which more effectually opened the Chinese Empire to foreign commerce and foreign travel.

In the same year the new Colony of Queensland was called into existence.

In 1861 Her Majesty's mother, the Duchess of Kent, died; and in the same year a yet heavier loss was sustained by the Queen. Her husband, Prince Albert, died on December 14, after a very short illness. His work and character have been more widely known and better appreciated since his death, and have worthily obtained for his memory an amount of respect and popularity which were but partially acquired by him during life. A few months before the Prince's death a great Civil War had broken out in the United States of America between the slave-holding and non-slave-holding States of that Union, and immediately before the Prince was seized with illness the rash act of an American naval officer had endangered the peaceful relations between England and the United States. The last paper written by the Prince was an addition to the draft of a despatch, which perhaps itself prevented the great calamity of hostilities between the two countries, and certainly contributed powerfully to that result.

In 1862 another great Exhibition was held in London, and one in Paris a few years later. Similar Exhibitions have since been frequently held in many of the chief towns of Europe and America.

In 1863 the Prince of Wales married the Princess Alexandra of Denmark.

In 1865 the American Civil War terminated in the complete victory of the Northern States, and re-establishment of the Union.

In 1864 Europe had been again threatened with disturbance, in consequence of questions arising out of the succession to the Throne of Denmark; but after a period of somewhat anxious suspense, England had found herself able to escape the necessity of taking part in the struggle. On the continent itself, however, a contest could not be long averted, and in 1866, after a brief campaign of only six weeks' duration, and in one great battle, the power of Austria in Germany was overthrown by Prussia, which became thenceforth the leading German Power.

In 1867 the Imperial Parliament passed a law relating to the Representation of the People and the Electoral Franchise. This Act, known as the second Reform Bill, very largely extend the political privileges granted by the original Reform Bill of 1832.

In this year also the Electric Telegraph was first laid between Europe and America, and inaugurated by mutual messages of compliment between the Queen and the President of the United States.

So ended the third ten years of Her Majesty's reign. They were a period marked at home by one great sorrow to the Queen and country; by a great increase in the political power of the people; and by an enormous development of wealth and prosperity;—and abroad, by the terrible outburst and stern repression of the Indian Mutiny; by the great American Civil War; and by wars of short duration, but vast importance, on the Continent of Europe, leading inevitably to that contest which was in a few years to follow.

In 1868 a Resolution was adopted by the House of Commons, which led, in the following year, to the Disestablishment of the Church of Ireland,—a measure of great importance, both in itself and in the indirect effects arising from it.

In 1870 an Act of Parliament was passed, by which legal provision was made, for the first time, for the general Education of the People. Over £5,000,000 is now annually granted by the State for educational purposes. At the time of Her Majesty's Accession but £20,000 was devoted to this object. In 1871 the great English Universities of Oxford and Cambridge, which had for many years been subjected to reforms, were made more fully available to all classes of Her Majesty's subjects by the abolition of religious tests.

In the summer of 1870, war suddenly broke out between France and Prussia. All the German States united with Prussia, and after defeating the French in almost every encounter, and taking the Emperor Napoleon and all his army prisoners at Sedan, the Germans besieged Paris, which capitulated early in 1871. The King of Prussia became Emperor of Germany, and France, now a Republic, had to submit to the terms of peace imposed by the conquerors. On the withdrawal of French troops from Rome in consequence of the war, Italy became one united kingdom.

In the winter of 1871 a dangerous illness brought the Prince of Wales to the point of death, and his recovery was the signal for an outburst of loyalty throughout Her Majesty's Empire, which proved to all, both at home and abroad, who may have doubted it, the strength and unanimity of that sentiment among Her Majesty's subjects.

In 1875 the Prince of Wales visited India and Ceylon.

In 1876 a great war commenced between Russia and Turkey, and caused serious apprehensions that it might prove necessary for England to take part in the conflict,—a catastrophe happily avoided.

The fourth decade of Her Majesty's reign was, like the third, marked by two European wars, from participation in which England was able to keep aloof, but in the results of which her interests were in many ways necessarily affected. The ever-widening application in every direction of those material agencies, the force of which was beginning to make itself feebly felt at the commencement of Her Majesty's reign, is the most distinguishing characteristic of the period.

In 1878 Her Majesty first assumed the title of Empress of India. Towards the close of the year the Queen's daughter, Princess Alice, Grand Duchess of Hesse, died, on the anniversary of the Prince Consort's death.

In 1878 and 1879 the events of 1841 and 1842 were exactly repeated in Afghanistan. Again the Ruler of Cabul was dethroned, and another Prince installed there under British protection; and again was the new order of things upset by a rising in Cabul, in which, as in 1841, the British Envoy was killed. Again, too, was the country re-conquered, and again was it thought desirable after conquest to relinquish its possession.

In 1882 events led to the occupation of Egypt by British troops,—an occupation it has as yet been found impossible to discontinue.

Of the events of the later years of this fifth decade of Her Majesty's reign, which has just now closed, it is unnecessary to dwell. The third Reform Bill of 1884,—the series of measures dealing with interests in land in Ireland,—the proposals for Irish self-government,—and the recent dissolution of Parliament and its results,—are all of too late occurrence not to be had in full remembrance, or not to be still the subject of conflicting opinions and passionate controversy.

Eight millions of square miles have been added to the territory of the British Empire since Her Majesty's Accession, and her subjects now exceed 376,000,000 in number.

But in addition to the great events which have affected the whole of Her Majesty's Empire, it will be right rapidly to enumerate the most remarkable occurrences which have taken place in this Island since the date of Her Majesty's Accession.

In 1838 the Legislative Council of the Colony, created but not completed in 1833, received its full complement of Members.

In 1844 the last remains of Slavery were wholly abolished.

In 1848 a slight insurrectionary movement took place in a part of the Kandyan districts, which is only worthy of mention in order to contrast it with the loyalty of all classes ten years later, on which the Governor of Ceylon was able safely to rely, when in 1857 he sent all the available troops in this Island to assist in the suppression of the Indian Mutiny.

In 1856 Sir Henry Ward commenced the restoration of the long-neglected Irrigation System of the Island; and in 1857 the ancient Village Councils were revived, chiefly with a view to the promotion and enforcement of Irrigation Works.

In the same year the first sod was cut of the first Railway in Ceylon.

In 1858 Ceylon was united with India by the Electric Telegraph.

In 1865 the Municipalities of Colombo and Kandy were established.

In 1868 the general scheme of Public Education now in force was adopted by the Legislature.

In 1870 legislative measures enabling the tenants of Temple Lands to commute their services were adopted, and in the same year the Ceylon Medical School was established.

In 1871 the powers of Village Councils were largely extended, and Village Tribunals instituted.

In 1875 the first stone of the Colombo Breakwater was laid by His Royal Highness the Prince of Wales.

In 1881 an Ordinance, which, however, did not come fully into effect until 1886, was passed, withdrawing pecuniary aid, saving in the case of vested life interests, from all Ecclesiastical Bodies.

In 1883 a Code of Criminal Law and Procedure was passed, which came into operation at the beginning of 1885.

In 1885 Currency Notes were first issued by the Government.

In 1886 the Colombo Breakwater was completed.

The Population of Ceylon, which in 1837 was estimated at 1,243,066, and on the first census taken in 1871 was found to be 2,405,287, now amounts to about 3,000,000.

The Revenue, which in 1837 was £371,993, amounted in 1867 to £969,936, and in 1886 to R12,882,549.

The number of miles of Main Roads open in 1837 was about 450; in 1887 it was 3,343.

The number of Estates in the hands of European Settlers in 1837 probably did not exceed 50; in 1887 it was over 1,500. The development of Agricultural Industry which these figures denote is, itself, the most remarkable feature in the History of Ceylon during Her Majesty's reign. It is a development which has changed the physical appearance of the country and profoundly modified its social condition, and which is due to the energy and perseverance of men who have shown that they can bear adversity with fortitude as they sustained prosperity with credit.

PRÉCIS OF PROVINCIAL REPORTS.

WESTERN PROVINCE.

Ratnapura.—At 8 o'clock Divine Service was held at St. Luke's and the Roman Catholic church. At 9 o'clock sweetmeats were given to the children. At 12 o'clock a Perahera procession proceeded to the Esplanade, where the Assistant Government Agent having read the Record, the National Anthem was sung and a salute fired. At 1 P.M. food was distributed among the poor, in the afternoon sports were held, and at 6·30 fireworks and illumination commenced. The weather was unfortunately extremely unfavourable.

A Perahera procession was conducted from Minawe to Kendagomuwa. At several centres in the Kuruwiti, Nawadun, Meda, Kadawatu, Atakalan, Kolonná, and Kukulu kóráles, the Record was read, food distributed to the poor, games held, and fireworks let off.

Kégalla.—At dawn a Royal salute was fired. At 8 A.M. Divine Service was held in the Protestant and Roman Catholic churches. At 10.30 two processions, starting from the east and west ends of the town, marched through the gaily decorated streets to the Assistant Government Agent's residence. Mr. Price then joined the procession and proceeded to the pavilion, where he read the Record, after which the National Anthem was sung, and a salute of 50 guns was fired. At 12.30 Athletic Sports commenced, and at 4 P.M. the poor were fed and cakes were given to the school children. At 7 P.M. bonfires blazed up, and the town was illuminated. Wet weather marred the success of the bonfires. The Record was read at eighty-five places in the district.

Kalutara.—The Record was read at eleven places in the Totamuna, twenty-eight places in the Rayigam kórále, and seventeen places in the Pasdun kórále.

At 7 A.M. a cricket match commenced between the planters and the local Burgher eleven. At 11 A.M Divine Service was held in St. John's church, the feeding of the poor following immediately afterwards. At 3 P.M. a Perahera proceeded to the Esplanade. In addition to the usual throng of masks and dancers, a large pasteboard ship, a hobby-horse, and a wicker-work elephant graced the procession. At 4 P.M a Royal salute was fired, and the Assistant Government Agent read the Record, after which the National Anthem was sung. In the afternoon there were sports and dancing. At 7.30 a banquet was given by the District Judge, and at 9 fireworks were let off. Rain intertered somewhat with the sports

In the Panaduré Badda the Record was read at five centres, also at Bandáragama, Panapitiya, Matugama, Demodara, Agalawatta, and at numerous smaller centres and villages.

Negombo.—In the town the bells were pealed at 8 A.M. and Divine Service was held. At 9 the inhabitants formed a procession in the neighbourhood of the Assistant Government Agent's bungalow. The procession, headed by a tusker elephant, marched to the Esplanade, where the Record was read in English, Siṇhalese, and Tamil. The National Anthem was then sung and a salute of 50 guns was fired, after which sundry congratulatory addresses, including a Tamil lyric, were presented. In the afternoon there were games and a display of acrobatic feats. In the evening illuminations, fireworks, and bonfires closed the celebration. The feeding of the poor was postponed till the 29th, the 28th being a "day of obligation" in the case of the Roman Catholics.

At Udagampola, Minuwangoda, Diwulapitiya, Andiambalam, Kuranakatunaike, Síduwa, Alutépola, Kochchikada, Táláhéna, Dúwa, Katana, and Mirigama, the Record was read and general rejoicings took place.

CENTRAL PROVINCE.

Kandy, June 28.—The Parade of troops in the Barrack square was marred a little by a shower, but the sun shone out brightly at 8 A.M. when the troops and native Peraheras arrived on the Esplanade. The soldiers, drawn up in line under the Octagon, faced the flagstaff in the middle of the Esplanade, while the elephants with headmen and chiefs, forming a semicircle, took up their position at the far end facing the tower. The people occupied the sides, and the ladies filled the gallery along the Náta Dewála wall. Six Raṭémahatmayás met the Government Agent at the Maha Walkada, and escorted him to the Pattirippuwa, where he read the Record; the chiefs reading it afterwards in Siṇhalese and Tamil from the back of an elephant. Then the Royal Standard was hoisted, a salute of 21 guns was fired, and "God Save the Queen" was sung by school children. Service in St. Paul's and other churches followed. In the afternoon the Recreation Ground was opened by the Government Agent. Games and sports followed, also the feeding of the poor and a feast to the Industrial School. At 7 there was a fine Perahera, closing with the presentation to the Government Agent of loyal addresses from the Chiefs. Then followed fireworks.

The Jubilee was also celebrated with rejoicings in Udunuwara, Yatinuwara, Tumpané, Harispattu, Lower Dumbara, Upper Dumbara, Lower Héwáhęṭa, Udapaláta, and Uda Bulatgama.

Mátalé.—The day of celebration was opened with a salute of 21 guns, sufficiently represented by dynamite cartridges. Then followed a distribution of food to the poor at the Kachchéri. At 9 A.M. there was a special Thanksgiving Service in the places of worship of all denominations. At 11.30 the various bands began to assemble at Mandandawela, the northern limit of the town, whence the great procession was to start. At 12.30 the procession was formed, and accompanied by flags, music, and three elephants in gala trappings, marched through the principal street to the Esplanade. Here a fine pandal had been erected, from which the Record was read by the Assistant Government Agent. The Record was then read in Siṇhalese and Tamil, after which the Royal Standard was run up, a salute of 50 guns was fired, and the school children sang the National Anthem. The afternoon was devoted to native sports and competitions of various kinds, which went on till dusk, when there was a great display of devil-dancing.

In the evening the whole town was illuminated, and a most successful display of fireworks was given. The weather was exceedingly unfavourable, but in spite of constant showers everything went off well.

The celebration of the Jubilee in the outlying parts of the Mátalé district was as successful as in the town. The bonfires on Dambulla rock and on Muwagalakanda, which lighted up the northern and southern ends of the district, were a most conspicuous feature of the general illumination.

Nuwara Eliya.—Although the celebration of the Jubilee in the town of Nuwara Eliya was by special permission postponed to September 17, rejoicings took place throughout the district on June 28. The principal centre in Uda Héwáhęṭa was Hanguranketa, where the Record was read by the Assistant Government Agent. Food was also distributed among the poor, and in the evening a display of fireworks was given.

The chief celebration in the Kotmalé district was at Maswela, where the Record was read, and the afternoon passed in games and dancing. The Jubilee was also celebrated generally in Walapané.

NORTHERN PROVINCE.

Jaffna.—At 9 A.M. on June 28 services were held in the Christian churches, while festivals were conducted in the principal Sivite temples. At 11 A.M. rice and vegetable curries were given to the poor. At 4 o'clock the Government Agent read the Record from a pandal on the Esplanade, the reading being preceded and followed by songs sung by school children. The Royal Standard was then hoisted and the National Anthem was sung. At 7.30 P.M. a Tamil play was acted, native music was played, and an exhibition of gymnastic feats was given. Later on the town was illuminated.

On the 29th the Government Agent was entertained at the Nallur pandal at 9 A.M. At 4 P.M. Mrs. Twynam laid the foundation stone of the Victoria Hospital for Women. At 7.30 a great display of fireworks was given, at which the untoward bursting of a rocket resulted in the death of three persons and the injuring of eleven others.

On the 30th dances, concerts, and various other entertainments were given.

Report of the Maniákára of Jaffna on the Celebration of the Jubilee in his Division.

The Jubilee of Her Majesty the Queen-Empress was celebrated in this district on the 28th, 29th, and 30th ultimo with the greatest enthusiasm and loyalty by all classes irrespective of caste or creed, and was the occasion of universal rejoicing throughout the length and breadth of the Peninsula. What with the numerous pandals very tastefully decorated, the reading of the Record of the principal events of Her Majesty's reign in English and Tamil in the presence of a very large concourse of people, the singing of lyrics in praise of Her Majesty, the display of fireworks and illuminations, the feeding and distribution of rice to the poor and cloth to the patients in the hospital, and other demonstrations too numerous to mention, the country presented a gay and cheerful appearance never before seen in Jaffna. Before the Jubilee, except the educated few, the great mass of the people knew the existence of the Queen something like a mythic personage. But the recent festivities and charities in her august name have not only revealed, even to the poor and the ignorant, her functions and high character as a woman and our Sovereign, but have also awakened a feeling of tender affection towards Her Majesty's person and throne in the minds of her subjects in this distant corner of her vast Empire. I can now safely assert without fear of contradiction, that there can hardly be a man or woman but has since known that our good and gracious Queen is the ruler of the largest and most powerful Empire in the world, and that she has reigned most successfully 50 years, during which her subjects at home and in every quarter of the globe have progressed wonderfully in commerce, civilisation, and political liberty.

I will now describe as briefly as possible the celebration of the Jubilee in my division.

June 28, 9 A.M.—The Church of England service at the Pettah Church was a magnificent and imposing affair, the church being full to overflowing and very elegantly decorated. Services were also held in other principal Christian churches. Pujas and libations were performed on account of Her Majesty's Jubilee at the three principal Sivite temples in the division, the Sivan temple and Kathiresan temple of the Chetties in Vannarponnai, and the Kandaswamy temple, Nallúr. By a singular coincidence this day happened to be such an auspicious one that there would have been festivals and pujas in all the leading Sivite temples here and other parts of this Island and India, even if it had not been the day of Jubilee celebration.

The Records of the principal events of Her Majesty's reign were read by me and the Udaiyár of Nallúr, in English and Tamil respectively, at the Nallúr pandal in front of the temple, and by Mr. Faddar and the Udaiyár of Vannarponnai west at the school bungalow in Kotuvil near the Church Mission church.

11 A.M.—Forty bushels of unboiled rice were distributed among the poor from the District Court premises at the rate of one measure for each ticket-holder. The number of persons in receipt of this charitable allowance was therefore about 1,200. The same quantity of rice was also boiled at the Friend-in-Need Society grounds, and the poor of the lowest classes, about 2,000 in number, were fed with vegetable curries.

4 P.M.—Reading the Record at the Esplanade pandal. This was the Jubilee pandal put up at considerable expense and labour by the Government Agent, and most tastefully and elegantly decorated. It had entrances through five arches dressed with bunting, evergreens, flowers, and bunches of young cocoanuts of different hues, and was divided into three sections, A, B, and C. Admission was by tickets, and it is computed that nearly 1,000 persons, all *élite* of the Society, had seats within this spacious pandal, while five or six times the number stood outside. In fact, the Esplanade in front of the pandal looked like one sea of heads. The Government Agent, accompanied by the members of his family and followed by his headmen, came in procession from the Kachchéri residency, and through several triumphal arches, and entered the pandal at the appointed time. The long distance by the main road from the Kachchéri to the pandal was one stretch of decorations on both sides of the road. The Records of the principal events of Her Majesty's reign were read by him from the central position allotted to him. I give below the programme of what took place at this pandal the same day and night, just before and after the reading of the Record :—

Lyric, sung to music by Mrs. Rigg and girls of the Wesleyan Mission School.
Reading of the Record of the principal events of Her Majesty's reign by the Government Agent.
Tara in English set to a Tamil tune—Boys of Mr. Nevin's School.
Lyric, sung to accompaniment on violin by Mr. Solomonpillai and boys.
Unfurling of the Royal Standard.
Salute of fifty guns.
Feu de joie after every ten guns.
Music in the intervals by Mrs. Rigg.
Three cheers.
The National Anthem sung to music.
Native music.
7.30 P.M.—Tamil play, "Varthaka Nadagam."
Gymnastics by Mr. Ramalingam and others.
Native music—Fiddlers, &c.

The whole of the Pettah and its suburbs was *en fête* that day, and the illumination of the houses and streets of the town and of the pandals in the night presented a brilliant appearance unparalleled in the history of Jaffna.

6 P.M.—The Government Agent visited the pandal in Moor street, Vannarponnai west, put up by the Kachchéri Shroff's brother.

June 29, 9 A.M.—The Government Agent and other high officials of Government and leading natives were entertained at the Nallúr pandal erected by Mr Mailvaganam, the Government Storekeeper

4 P.M.—A very large number of people assembled at the hospital premises, and were entertained at the permanent memorial pandal. Mrs. Twynam laid the foundation stone of the Victoria Hospital for Women, which is to be the permanent local memorial.

7.30 P.M.—There was a grand display of fireworks in front of the Esplanade pandal, and thousands of people from different parts of the district flocked to see it. This was going on for an hour an a half without intermission, when at its close a rocket (an English one) burst and injured fourteen persons, of whom three died immediately and one on the 1st instant, while a few are still in hospital. The dead as well as the wounded were instantly removed from the scene of the catastrophe by order of the Government Agent and the Assistant Superintendent of Police, who spent the remainder of the night in hospital with the unfortunate sufferers, while the Tamil play of "Arichantra" was going on at the pandal till its close at about 3 A.M

The entertainment was so well managed that the terrible accident did not to any extent interfere with it, and no unnecessary alarm was allowed to spread among the assembled multitude.

June 30, 9 A.M.—The Government Agent was received at the pandal at Colombogam.

Mr. Advocate Nagalingam and some of his friends erected an excellent pandal near the Customs, and entertained a large number of people with concerts, nautch, and native dancers on the 28th and 29th ultimo.

It would be impossible to enumerate all the pandals put up in my division, and I have referred only to the most important ones. I should not, however, omit to mention the pandal in front of the Kachchéri, where also various sorts of entertainments took place.

Apart from the unfortunate accident referred to, the Jubilee celebration here was a complete success beyond any one's expectation, and as a demonstration of our loyalty to our Queen and exhibition of joy on the attainment of the Jubilee of her reign, cannot fail to leave an excellent and lasting impression in the minds of the inhabitants of this Peninsula.

Mannár.—Service was held in the Protestant church, and the Record was read in the Kachchéri on the 28th. Food was given to the poor, sports were held, fireworks were let off, and a play was acted on the 29th.

Varuṇiya-Viláṇkulam.—The chief events were the feeding of the poor, the reading of the Record, fireworks, music, and dancing. Special services were not held, owing to the non-receipt of instructions on that head till the 30th.

Celebrations were held on the same scale at Mullaittívu, Kayts, Chavakachchéri, Point Pedro, Valikámam north (where "Julius Cæsar' was acted in English), Valikámam west, Vadamirachchi, Valikámam east, Tenmorachchi, Pachchilapalai, Punakari, and Karaichchi; and the Record was read at Valuvettiturai and Kankésáṇturai. The Jubilee was also celebrated throughout The Islands.

Southern Province.

Galle.—At 6.45 A.M. on June 28 a Parade of the Argyll and Sutherland Highlanders and the Volunteers took place. At 9 o'clock Divine Service was held in the Christian churches. At noon the Government Agent read the Record from a large pavilion erected opposite the Oriental Hotel. The reading was followed by the singing of the National Anthem. Rain beginning to fall shortly afterwards, the sports and illumination were postponed to the 29th, when they turned out a complete success. In spite of the unfavourable weather the distribution of food to the poor took place on the 28th.

Celebrations were also held at numerous centres in the pattus of Wellabada, Talpé, and Gaggabada, as well as at Nágoda in the division of Mapalagama.

Hambantota.—On the 28th Thanksgiving services were held in the forenoon, and a large number of poor were fed. At 4 P.M. a procession conducted the Assistant Government Agent to the Kachchéri, from the balcony of which he read the Record. A Royal salute was then fired, and the National Anthem sung. The afternoon's events had to be postponed to the 29th on account of rain. In the evening several bonfires were lighted.

On the 29th sports began at 7 in the morning. At 3 o'clock there were sports and a treat for children, and at 5 P.M. the senior sports were resumed. In the evening there was a display of fireworks. On the 30th the sports continued, and in the evening a concert terminated the celebration.

There were rejoicings at many places in the Giruwa pattu, East Giruwa pattu, and the Mágam pattu.

Mátara.—Thanksgiving services were held in the different churches at 9.30 A.M. on June 28. At 10.30 there was a *fête* on the river, consisting of boats bearing a huge Buddha, puppet shows, acrobats, &c., which caused much amusement to the onlookers. At 12 o'clock the poor were abundantly fed. At 4 o'clock the processions of the various communities assembled at the Kachchéri, whence, uniting in one brilliant and picturesque train, they started for the pavilion on the Fort esplanade. Here the Assistant Government Agent read the Record, which was followed by the recitation of native stanzas in honour of Her Majesty. Three volleys were then fired, the Union Jack was hoisted, and the assembled multitude united in singing the National Anthem. Rain somewhat interfered with the afternoon's programme; but the illumination and bonfires in the evening were most successful. The same evening the Kadowediya theatre was opened with a Sinhalese play. On the 29th Mrs. Baumgartner planted a memorial tree at 8 A.M., and at 2 o'clock the Agri-Horticultural Exhibition was opened. Here a luncheon was given, at which the Government Agent in a "Review of the past twenty years of the Mátara District" drew attention to the great benefits which had accrued from irrigation works and the opening up of the district by roads. In the evening a concert was given, followed by an amusing farce. Later on there was a display of fireworks. On the 30th the prizes were distributed to the successful exhibitors; in the afternoon there was a Gymkhana; and in the evening a repetition of the amateur theatricals and fireworks.

The Jubilee was celebrated generally throughout the Morawak kóralé, the Kandabada pattu, the Gangabada pattu, the Wellabada pattu, and the Weligam kóralé.

Eastern Province.

Batticaloa.—At 6 A.M. the bells were rung, and at 8 special services were held in all the churches. At 9 a Royal salute was fired from H. M. S. "Egeria." From 9.30 to 12 food was distributed among the poor, and cloths to the most deserving indigent women. At 10 o'clock the Government Agent, accompanied by the headmen, started in a procession, proceeded by six gaily caparisoned elephants, to the District Court house, where a body of blue-jackets from the "Egeria" acted as a guard of honour. Having read His Excellency the Governor's order with reference to the restoration to the original owners of paddy lands taken over by the Crown for non-payment of grain tax, the Government Agent proceeded to read the Record, after which the National Anthem was sung. In the afternoon there were Athletic Sports, in which the blue-jackets took part, and which caused much amusement to the spectators, who numbered from 4,000 to 6,000. At 7 o'clock the bonfire on Pamputimalai was lighted, and at 9 a display of fireworks commenced on the esplanade, blue lights and rockets being fired from the boats of the "Egeria." On June 29 and 30 the Athletic Sports were continued, and a cricket match—Batticaloa *v.* H. M. S. "Egeria" was played.

At *Kalmunai* the same programme was followed, the girls of the boarding school singing "God Save the Queen" after the reading of the Record.

At *Puliyantivu* the bells were rung from 6 to 8 A.M., and services were held in all the churches. At 9 food was given to the poor, and at 12 a procession, accompanied by musicians and elephants, escorted the Government Agent to the Durbar Hall, where the Record was read and the National Anthem sung. In the afternoon sports were held, in which the sailors took part, and from 9 to 12 fireworks and illuminations attracted many sightseers.

On the 29th there was music, singing, dancing, and a performance of a Tamil drama.

On the 30th the Record was read and alms were distributed at Kattankudi.

In all the towns throughout the district the rejoicing took a similar form. the Record was read and alms were distributed in the morning, while the afternoon was devoted to games and sports of a more or less primitive nature, and the evening was spent in dancing, singing, playing, looking at the fireworks and illuminations, and in many cases in attending the representation of a native play.

Trincomalee.—The feeding of 120 poor commenced at 8 A.M. At 9 service was held at the Fort church and also at the Wesleyan chapel. At 3 o'clock the Assistant Government Agent read the Record from a pavilion, after which it was read in Tamil. Then followed the playing of the National Anthem, a salute of 50 guns, the hoisting of the Royal Standard, and the ringing of all the bells in the town. Afterwards there were sports, and at 8 o'clock a display of fireworks, H. M. S. "Mariner" and H.M.S. "Kingfisher" being brilliantly lighted up. On the 29th there was a celebration of High Mass at St. Mary's church, and at 3 o'clock more sports, while at 8 o'clock there was a further display of fireworks. On June 30 the prizes won at the sports were distributed at 5 P.M. at the pavilion, and at 8 o'clock a good concert ended the festivities.

The rural celebration of the Jubilee consisted of the reading of the Tamil version of the Record at Kuchchaveli, Tampalákam, Topur, and Mutur, which was followed by the feeding of the poor, sports, and native dancing.

North-Western Province.

The Seven Kóralés.—Fifty-four centres were appointed for the reading of the Record, the place selected being, as a rule, the residence of a chief headman, the Village Tribunal court-house, or a Buddhist temple. At each of such centres the Record was read early in the morning to the assembled crowd, a religious service was held, the poor were fed, and the remainder of the day was passed in general rejoicings.

Kurunégala.—Jubilee Day was ushered in by the firing of a cannon at midnight of June 27 and 28. At 6 o'clock the Police and Volunteers were paraded on the Esplanade, and a Royal salute announced the hoisting of the Royal Standard. From 8 to 10 Thanksgiving Services were held in the Anglican and Roman Catholic churches. From 11 to 2 the poor, to the number of about 2,500, were fed.

At 3.30 P.M. a procession, accompanied by elephants and consisting of the Government officials, the chiefs, and the clergy, formed in the grounds of the Government Agent's residence, and proceeded to the pavilion on the Esplanade, where the Volunteers had taken up their position.

At 4 P.M. the Record was read in English by the Government Agent, and afterwards in Sinhalese by the Kachchéri Mudaliyár, the National Anthem was sung, and the Royal Standard again hoisted and saluted.

At 6.30 P.M. a Perahera went round the town. Thanksgiving Services were held in the mosques and the Hindu temple, in both of which the Record had previously been read. At 8 P.M. the town was illuminated, but the effect was marred by unfavourable weather. At 9 o'clock there was a display of fireworks.

At 2 P.M. on June 29, European and native sports (including an elephant race) were held; but the continuance of unpropitious weather somewhat interfered with their success.

At *Chilaw* religious services were held in the Protestant and Roman Catholic churches in the morning. At 10 o'clock the Record was read, and food was afterwards distributed among the poor, the proceedings being brought to a close with the illumination of the town, dancing, and music.

This programme was also followed at Madampé, Kalpitiya, and Puttalam, while throughout the Pitigal kóralé north, Pitigal kóralé south, and the kóralés of Demala Hatpattu, the inhabitants of the various villages, assembling at centres, heard the reading of Bana, congregated to hear the Record, fired salutes, sang the National Anthem, and indulged in music, dancing, and processions.

North-Central Province.

Anurádhapura.—The celebration was commenced on June 28 with Athletic Sports in the morning and forenoon. At 11 o'clock the Government Agent, who was escorted by a procession from the Kachchéri, proceeded to the pandal and read the Record, after which a salute was fired. At 2 o'clock a special religious service was held in the schoolroom in the presence of a large congregation, to whom the telegram received from Her Majesty was read. In the afternoon great interest was displayed in the sports, which continued till dark; and at 9 o'clock the fireworks and native music began. A large bonfire on Mihintalé was a very conspicuous feature of the illuminations. On the 29th there was a cricket match, and the sports were brought to a conclusion, the prizes being distributed by Mrs. Ievers. During the night a Tamil play was witnessed by an immense crowd. On the 30th a Lawn Tennis tournament was held, and in the night the Tamil play was resumed.

The town was decorated and illuminated by the householders at their own expense, and the inhabitants, with a display of the most genuine loyalty, contributed in every way to the success of the celebration.

At *Kalávewa* the pioneers and local inhabitants engaged on the works had three days' holiday. The Record was read by the Doctor in charge, a feast was given, a bonfire lighted on Dahiyakanda, and fireworks, threaticals, and dancing enlivened the evening.

Province of Uva.

Badulla.—The day began with the firing of a Royal salute: next there was a review of the Volunteers, then Thanksgiving Services in the different places of worship, Christian and non-Christian. At 11 there was a presentation of flags to school children and a miniature Durbar of the children of Chiefs. At 12 the poor were fed. At 2 the Government Agent read the Record from a pavilion to a crowd numbering several thousands, and announced in Her Majesty's name that fields, still in the hands of the Crown, which had been taken over for arrears of grain tax, were to be restored to the original owners. After congratulatory addresses, to be transmitted to Her Majesty, had been presented by representatives of different sections of the community, a procession was formed, in which several Englishmen joined, and paraded the streets of the town. At 4 P.M. there was a children's fête. At 9 P.M. the Government Agent planted a memorial tree by torchlight, accompanied to the site selected by a brilliant native procession. Later on there was a fine exhibition of fireworks, the town was brightly illuminated, and a bonfire was lighted on the top of Namanakúli, a mountain rising some 4,000 feet above the station. On the following day native sports, postponed from the 28th on account of rain, were held, and a striking performance of Kandyan dancers was given at night in the open air.

Throughout the surrounding districts the chief headmen read the Record, and in the case of districts where the population is scattered, they moved in procession from village to village in order to read the Record at each. The place of rendezvous was, as a rule, the pansala, where the priests afterwards addressed the throng, referring in terms of praise and loyalty to Her Majesty's beneficent rule and purity of private life. In several places memorial trees were planted. In villages where there were schools, the children were fêted and alms were everywhere distributed among the poor. In Haldummulla and the smaller towns the celebration was on a somewhat more ambitious scale.

In describing the celebration of the Jubilee in any individual Province, it would be invidious to make special mention of the spontaneous and enthusiastic loyalty of the native population which has in every instance been most conspicuous, and has in large measure contributed towards making the 28th of June, 1887, a red letter day in the annals of the country.

XV.—1887.

VILLAGE TRIBUNALS.

A STATEMENT

SHOWING

THE DISTRICTS, PRESIDENTS, THEIR SALARIES AND STAFFS, AND THE NUMBER AND NATURE OF THE CASES DISPOSED OF DURING 1886.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

RETURN showing the Names of Districts, Presidents, &c., and the Number of Cases Instituted, Decided, and in Appeal, under "The Village Communities Ordinance," throughout the Island, for 1886

Districts.	Presidents	Salaries	Staff.	Cost of Staff per annum	Pending on January 1, 1886.		Instituted during 1886.		Amicable Settlements under Section 23.		Decisions.									Appeals.				Pending on December 31, 1886.	
											Civil.		Criminal.							To Government Agent.		From G. A. to Governor and Ex. Council.			
					Civil.	Criminal	Civil.	Criminal.	Civil.	Criminal.	Money	Land.	Breaches of V. C. Rules.	Irrigation.	Assault.	Theft.	Malicious Injury	Cattle Trespass.	Maintenance.	Confirmed.	Set Aside.	Confirmed.	Set Aside.	Civil.	Criminal.
Western Province.																									
Aluthúru Kóralé South.				Rs.																					
Gampaha ...	D. A. E. Dias Baṇḍáranáyaka	Rs 1,800 per annum, including travelling allowance.	2 Native Writers at Rs. 20 each, 2 Messengers at Rs. 10 each, and 2 Sweepers at Rs. 5 each per month.	840	15	10	366	364	58	85	311	—	89	8	92	76	11	1	—	8	1	—	—	10	12
Kanuwana ...					35	27	387	463	55	100	350	—	90	—	171	110	6	—	1	15	2	2	—	7	12
Héwágam Kóralé.																									
Haṇwęlla	D. A. A. Wijayasiṅha, Mudaliyár.	Rs. 1,600 per annum, including travelling allowance.	2 Native Writers at Rs 20 each, 2 Peons at Rs. 10 each, 1 Process Server at Rs 10, and 1 Sweeper at Rs. 3 per month.	876	24	44	329	441	3	42	337	5	152	2	119	106	12	36	4	25	10	1	—	8	12
Nawagomuwa ...					10	17	272	396	5	30	272	—	107	3	110	120	10	28	—	9	4	—	—	5	5
Mulleriyáwa ..					1	5	116	184	5	3	103	—	56	—	38	72	2	15	—	4	2	—	—	3	3
Siyané Kóralé West.																									
Mahara ...	D. B. P. Abayasékara, Mudaliyár.	Rs. 1,500 per annum, including travelling allowance.	2 Native Writers at Rs. 20 each, 2 Messengers at Rs 10 each, and 1 Sweeper at Rs. 5 per month.	780	5	4	297	460	30	135	260	2	79	—	100	106	7	1	5	3	—	1	—	—	1
Henaratgoḍa ...					4	12	565	843	142	269	412	13	132	1	146	289	8	1	5	5	2	—	—	2	4
Salpiṭi Kóralé.																									
Gaṇgoḍawila ...	L. C. De F. Samanakkody, Mudaliyár.	Rs. 1,600 per annum, including travelling allowance.	1 Native Writer at Rs. 20, 1 Peon at Rs. 10, 1 Process Server at Rs. 10 per month.	480	7	50	394	863	5	71	383	2	166	2	301	250	18	77	1	41	5	1	—	11	27
Kégalla.																									
Máwanęlla ...	R. T. S. V. T. W. Tikiri Baṇḍá.	Rs. 1,500 per annum, including travelling allowance.	1 Native Writer at Rs 20, 1 Messenger at Rs. 10, and 2 Sweepers at Rs. 5 each per month.	480	50	22	1493	1787	86	277	1319	99	653	9	177	406	55	128	41	78	5	2	—	39	63
Rambukkana ...																									
Dehiówiṭa ..	J. C. Molamure ...	Do.	1 Native Writer at Rs. 20, 1 Messenger at Rs. 10, 1 Sweeper at Rs. 5, and 1 do. at Rs. 2·50 per month	450	84	69	1010	684	85	78	899	5	314	6	121	70	5	86	12	23	5	—	—	105	61
Ruwaṇwęlla ...	E. F. Mapitigama, acting																								
Bulatkohopiṭiya ...																									

Ratnapura.																										
Higgashéna ...	E. F. Mapitigama...	Rs. 1,500 per annum including travelling allowance.	1 Clerk at Rs. 20 and 1 Peon at Rs. 10 per month	360	32	11	500	391	5	38	513	9	153	1	39	123	10	31	6	29	10	—	—	5	1
Minnána ...	J. C. Rambukpota, acting.				3	19	263	267	5	53	257	1	114	—	14	59	2	39	1	13	5	1	1	3	4
Kiriella ...					20	10	203	153	11	23	201	1	61	—	11	35	3	26	1	15	2	—	—	10	3
Central Province.																										
Kandy.																										
Uḍunuwara ...	K. B. Kobbékaduwé	Rs. 1,320 ...	1 Clerk at Rs 20, 1 Peon at at Rs 10, and 1 Watcher at Rs. 2 50 each.	390	33	48	387	678	59	334	305	29	81	—	145	44	53	12	11	21	5	1	—	27	46
Yaṭinuwara ...	do.	Rs. 360 ..	1 Clerk at Rs. 20 and 1 Peon at Rs. 10.	360	67	53	460	631	44	190	417	27	34	35	238	62	45	17	31	9	9	2	—	39	32
Tumpané ...	A. E. Paranagama	Rs. 360 ...	1 Clerk at Rs 20, 1 Peon at Rs. 10, and 2 Watchers at Rs. 2 50 each.	420	45	26	237	346	109	160	136	8	46	10	60	42	4	15	10	2	2	1	—	29	25
Hárispattu ...					37	33	300	479	164	242	154	—	22	49	54	52	6	26	35	10	2	—	—	19	26
Lower Dumbara ...	L. B. Rambukwella	Rs. 1,500 ...	1 Clerk at Rs. 20, 1 Clerk at Rs. 7 50, and 2 Peons at Rs. 7·50 each.	510	43	45	794	1087	22	83	738	9	355	67	172	150	93	66	57	38	13	3	—	68	89
Upper Dumbara ...	T. B. Rambukwella	Rs. 200 ..	1 Clerk at Rs. 10 and 1 Peon at Rs. 7·50.	210	128	76	735	662	134	129	687	2	262	14	69	75	50	79	22	—	4	—	—	40	39
Lower Héwáḇeṭa ..	L. B. Yatawara ...	—	—	—	—	9	—	420	—	115	—	—	192	18	—	—	—	—	—	1	—	—	—	—	104
Mátalé.																										
Mátalé North ...	V. W. Tikiri Baṇdá	Rs 1,200 ...	1 Clerk at Rs. 20, 2 Peons at Rs 12·50 each, 1 Watcher at Rs. 2, and another at Rs 2·50,	594	102	61	988	1048	141	103	797	78	402	—	155	115	18	233	18	34	2	2	—	74	65
Mátalé East ...	T B. Aluwihára ...	Rs. 1,200 ...	1 Clerk at Rs 15 and 2 Peons at Rs. 9 each.	396	12	14	963	821	146	256	785	31	101	—	243	91	25	91	22	28	4	—	—	13	6
Mátale South ...	Dorakumbure Disáwa.	—	—	—	—	—	—	242	—	44	—	—	124	45	—	—	7	—	—	6	—	—	—	—	22
Nuwara Eliya.																										
Kotmalé ...	W. P. Baṇdá ...	—	—	—	—	—	—	95	—	30	—	—	54	11	—	—	—	—	—	2	—	—	—	—	—
Upper Héwáḇeṭa ...	J. W. H. Andarawęwa.	Rs. 1,320 ...	1 Clerk at Rs. 30, 1 Peon at Rs. 9, and another at Rs. 5.	528	57	22	460	427	54	285	3[illegible]2	44	36	30	7	13	5	33	5	20	8	—	—	37	35
Walapané ...					45	37	407	499	59	300	277	76	45	37	9	19	3	62	6	11	5	—	—	40	55
Southern Province.																										
Galle.																										
Bentoṭa-Walalláwiṭi Kóralé.	J E. Jayatileke ...	Rs. 1,460 per annum, including travelling allowance	1 Clerk at Rs. 20 and 2 Messengers at Rs. 7·50 each per month	420	275	121	1372	711	56	65	1589	—	260	—	142	265	29	67	3	52	22	3	—	2	1
Hinidum Pattu and Mápalagama.	Charles Goonetilaka	Rs. 1,360 per annum, including travelling allowance.	1 Clerk at Rs 20 and 2 Messengers at Rs 7·50 each per month.	420	18	20	516	405	68	168	447	2	75	—	42	113	4	10	5	11	1	—	1	17	8

Districts.	Presidents.	Salaries.	Staff.	Cost of Staff per annum	Pending on January 1, 1886		Instituted during 1886		Amicable Settlement under Section 23		Decisions									Appeals				Pending on December 31, 1886.	
											Civil.		Criminal.							To Government Agent.		From G. A. to Governor and Ex. Council.			
					Civil.	Criminal.	Civil.	Criminal.	Civil.	Criminal.	Money.	Land.	Breaches of V. C. Rules.	Irrigation.	Assault.	Theft.	Malicious Injury.	Cattle Trespass.	Maintenance.	Confirmed.	Set Aside.	Confirmed.	Set Aside.	Civil.	Criminal.
Southern Province—*contd.*				Rs																					
Mátara.																									
Weligam Kóralé ...	R. R. Dunuwila ...	Rs. 1,100 and Rs.360 as travelling allowance.	1 Clerk at Rs. 20, 2 Messengers at Rs 7·50 each, 2 Court-keepers at Rs 2·50 each, and 1 Court-keeper at Rs. 1·50 per month.	498	1	23	912	812	165	250	736	5	121	29	209	190	19	1	8	30	3	5	—	7	8
Morowak Kóralé ...	C. A. Senewiratne	Do	1 Clerk at Rs. 20, 2 Messengers at Rs. 7·50 each, and 2 Court-keepers at Rs. 2·50 each per month	480	34	34	1099	550	342	136	712	46	81	—	123	150	11	41	13	92	10	4	—	33	29
Wellaboda Pattu ..	J. D. C. Perera ...	Rs. 840 and Rs.300 as travelling allowance.	1 Clerk at Rs 20, 2 Messengers at Rs. 7·50 each, 1 Court-keeper at Re. 1, and 1 Court-keeper at 25 cents per month	435	27	18	1767	1351	265	352	1332	183	380	3	289	236	42	10	46	168	22	7	—	14	11
Gangaboda Pattu ...	J. P. Goonatilaka...	Do	1 Clerk at Rs. 20 and 2 Messengers at Rs. 7·50 each per month.	420	143	93	1494	980	525	261	1025	47	218	—	257	274	18	8	13	96	8	9	1	40	24
Eastern Province.																									
Batticaloa North ...	E. Crowther ...	Rs. 1,200	3 Clerks, 1 at Rs. 15 and 2 at Rs. 10 each, and 1 Messenger at Rs. 7·50 per month.	510	316	138	3193	959	1437	293	1624	14	324	—	154	150	21	7	59	12	1	—	—	434	89
Batticaloa South ...	M. Sidemparanather	Rs. 1,200 ...	3 Clerks at Rs. 15 each and 2 Messengers at Rs. 7·50 each per month.	720	51	17	3228	1285	1583	431	1671	—	329	—	281	99	4	4	126	28	3	1	—	25	31
Trincomalee ..	V. C. Kanagasabey, Mudaliyár.	Rs. 1,000 and Rs.200 as travelling allowance.	1 Clerk at Rs. 15, 1 Messenger 1 at Rs. 10 and 1 at Rs. 7·50 per month.	390	280	20	1901	383	262	108	1530	2	40	—	40	21	5	27	2	4	3	1	—	387	60
North-Western Province.																									
Kurunégala.																									
Wéudawili Hatpattu...	B. D. Tenne ...	* Rs. 900 and Rs.360 as travelling allowance.	1 Clerk, 2 Messengers, and 2 Court-keepers.	540	99	55	1046	632	—	13	1085	20	202	—	144	150	24	109	14	12	3	1	—	40	31

Wanni Hatpattu ...	S. E. Herat from January to July; J. H. A. Bakmiwewa from August 1.	Rs 800 and Rs. 360 as travelling allowance.	1 Clerk, 1 Liyanarala, 2 Messengers, and 2 Court-keepers.	672	303	1281	1115	1286	25	19	1115	39	818	—	146	83	—	673	23	63	12	—	—	239	808
Déwamędi Hatpattu...	J. H. A. Bakmiwewa from January to July; W. E. Denapitiya from August 1.	Do.	1 Clerk, 2 Messengers, and 1 Court-keeper.	490	227	46	1166	658	108	28	1010	39	186	—	110	132	—	103	13	31	4	—	—	236	132
Kaṭugampola Hatpattu	R. B. W. Moonamale	Do.	1 Clerk, 2 Messengers, and 2 Court-keepers.	540	123	82	2190	847	131	214	1898	48	142	—	112	201	1	161	14	12	1	—	—	236	84
Hiriyala Hatpattu ...	W. E. Dęnapitiya from January to July; S. E. Herat from August 1.	Do.	Do. do. ...	525·50	283	132	833	604	154	141	836	23	101	—	79	85	15	246	13	41	11	4	—	103	56
Dambadeni Hatpattu	S. T. Tennekoon ...	Do.	Do. do. ...	540	561	552	1468	1224	297	179	1586	11	485	—	159	360	7	249	19	57	26	4	—	135	318
Puttalam.																									
Demala Hatpattu ...	R. A. H. Banda ...	Do.	1 Liyana Arachchi and 1 Messenger.	174	45	30	309	502	121	53	186	7	261	—	52	10	—	60	1	1	—	—	—	40	95
NORTH-CENTRAL PROVINCE.																									
Nuwaragam Paláta ...	T. B. Timbiriwewa from January 1 to June 6, 1886; B. W. Ralapanawe acting from June 7 to October 20, 1886; Ilangasinhe Katukumara Rajakaruna Hurule Henerat Bandá from October 20.	—	—	—	5	21	850	812	312	305	499	37	197	81	40	14	2	81	6	49	15	1	—	7	107
Hurulu Paláta ...	Kunchikulama Rajakaruna Kapuruhami.	—	—	—	17	15	368	594	118	283	244	5	147	33	12	3	3	26	3	56	27	1	2	18	99
Kalagam Paláta ...	Disanayaka Herat Bandaralage Hemunnewe Ukku Bandá.	—	—	—	—	—	533	550	106	338	417	10	110	6	20	2	6	57	11	32	4	2	—	—	—
Tamankaḍuwa ...	William Abraham Dúllęwe. Adigar.	—	—	—	71	15	215	51	46	9	209	3	25	—	15	4	2	7	—	3	—	—	—	28	4
PROVINCE OF UVA.																									
Udukinda ...	D. W. Bandar ...	Rs 101·66 ..	1 Clerk at Rs 20 and 2 Peons at Rs. 12·50 each per month.	540	13	13	356	384	67	132	289	6	78	—	118	18	7	19	18	1	1	—	—	7	7

* The salary was increased from Rs. 800 to Rs. 1,200 per annum from October 1, 1886

XVI.—1887.

REPORT

OF A

COMMITTEE APPOINTED TO INQUIRE INTO AND REPORT

UPON THE

RECENT SERIOUS FAILURE OF THE MÁLIGÁKANDA RESERVOIR.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

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LETTER OF APPOINTMENT.

The Hon. the COLONIAL SECRETARY to the Hon. Lieut.-Colonel F. C. H. CLARKE, R.A., C.M.G.

Colonial Secretary's Office,
Colombo, March 4, 1887.

SIR,—THE recent serious failure of the Máligákanda Reservoir renders it highly desirable that its cause should, if possible, be traced, and I am directed to inform you that HIS EXCELLENCY THE GOVERNOR has appointed a Committee, consisting of yourself (as Chairman), the Hon. H. BOIS, Lieut.-Colonel CLIVE, Commanding Royal Engineer, and the DIRECTOR OF PUBLIC WORKS, to inquire into the subject and report thereon.

2. Mr. BURNETT will be instructed to render the Committee all possible assistance.

I am, &c.,
A. R. DAWSON,
for Colonial Secretary.

MALIGAKANDA RESERVOIR.

REPORT.

TO THE HON. THE COLONIAL SECRETARY.

IN accordance with the instructions conveyed in your letter of March 4, 1887, the Committee appointed to inquire into the cause of the failure of the Máligákanda Reservoir held their preliminary meeting on March 7, and subsequently met several times at the Reservoir for the purpose of viewing minutely the scene of the accident, and at the Council Chamber for the examination of witnesses.

2. As the Reservoir underwent modifications in construction after each successive failure, the Committee conducted their inquiry so as to elicit evidence in regard to the Reservoir under the different conditions of its construction.

3. The Committee find that there were in all three failures, as follows :—

4. *First Failure, October, 1885.*—This failure occurred on October 16, at a time when there was 24¼ ft. head of water in the Reservoir. A crack occurred in the north-east corner, partly through the wall ; a fracture right through the south-east corner ; and a fracture along the entire length of the flooring, about a foot inwards from the bottom of the east wall connecting the two angular breaks. Besides these, there was a fracture along the benching of the south wall, with cross cracks running from the benching generally in a north-east direction, and becoming more developed and intense where the south and east walls join. The greatest weakness in the structure was manifest on this occasion at the south-east angle. (See Plan A 1.)

5. The modifications introduced in the interior of the Reservoir after this accident, such as partially underpinning the walls, doing away with the benching on the west and south sides, carrying curved footings all round the Reservoir, filling in the angles between adjacent walls with concrete, and doubling the thickness of the flooring, are described in the evidence of the Chief Resident Engineer.

6. *Second Failure, December, 1886.*—This failure occurred on December 13, when there was a head of water of 29¾ ft. in the Reservoir. On this occasion a fracture developed all round the flooring of the Reservoir, at distances varying from 6 in. to 3 ft. from the walls, accompanied by cracks up all the concrete-filling at the corners, except at the north-east. The water was emptied from the Reservoir when the gaugings became very irregular. Weakness was on this occasion manifested longitudinally round the flooring and vertically at the corners at the Reservoir. (See Plan A 2.)

7. The modifications introduced in the interior after this accident, by an application of asphalt to the curved footings, are described by the Chief Resident Engineer in his evidence.

8. *Third Failure, February, 1887.*—This failure occurred on February 16, the Reservoir then being full to within 10 in. of the top. Ruptures from summit to foundation were manifested near and through the north-east angle and through the south wall, about 35 ft. from the south-east angle, with a connected rent through the concrete flooring down to the foundations ; a fracture through the panel of the east wall nearest the centre ; the arching nearest the east wall cracked, and the tie-rods buckled on the northern half of the arching ; and a crack along the top of the parapet of the east wall along half its extent. Greatest weakness exhibited at the east wall. (See Plan A 3.)

9. The Committee find, in addition, several vertical cracks in the exterior of the structure, more particularly on the west wall, and a vertical crack (running up for several courses) right through the west wall, situated about 19 ft. to the north of the waste sluice, mentioned by Mr. Mitchell in his evidence, but described by Mr. Burnett as a face crack. The Committee desire to point out that such a crack as this, however slight it may appear to the eye, is, from the fact of being visible both inside and outside, nevertheless indicative of weakness in the structure, and that the mere size of a crack cannot be taken as a criterion of the amount of mischief that may lie behind it in the interior of the wall.

10. Such being the facts, the Committee proceeded to elicit evidence and opinion with a view to their explanation, but before doing so caused a series of levels to be undertaken for the purpose of determining whether any subsidence of the structure at any point had taken place. The result of these levels shows that there has been, in their opinion, no appreciable subsidence in the structure, and they are able to confirm in this respect the levels taken independently by the Chief Resident Engineer.

11. The explanation of the causes which have led to the failure offered by the witnesses under examination may be classed under three heads:—(1) Strain due to peculiarities in design; (2) strain due to inequalities of temperature affecting the structure; (3) weakness of structure due to a bad foundation and unsuitable design.

12. The first two causes are advanced by the Waterworks engineers alone. The failure of October, 1885, is ascribed by them to the pressure of water operating on the angular benching then under self-contained tension, and causing a crack through which water percolated into the foundations. That of December, 1886, is ascribed by Mr. Burnett to the pressure of the water operating on the self-contained strain in the curved footing producing a cross strain, thereby inducing a fracture through which water percolated into the foundations; Mr. Ewart ascribes it to contraction of the flooring due to the temperature of the admitted water being lower than the cement rendering While that of February, 1887, is ascribed by both engineers to strains on the structure due to temperature affecting the different walls unequally.

13. The explanation that the failures are due to a bad foundation, and in some cases to unsuitability of design as well, is offered by all the other witnesses, namely: Mr. Mitchell, the Contractor; Mr. Grinlinton, late of the Government Survey; Mr. Ormsby, M.I.C.E., and Mr. Vine, M.S.E., of the Public Works Department,—all gentlemen of more or less experience in the particular cabook formation upon which the foundations rest. They all describe the cabook stratum upon which the foundations rest as unsound and puddly when sodden with water, and emphasise the uncertain nature of this material for the foundations of such a massive work as that of a reservoir.

14. The borings undertaken at the instance of the Committee by the Engineer of the Government Factory, the result of which is given in his evidence, show that at 12 ft. down on the east and north sides of the Reservoir *karimati*, or unsound cabook, is met with, and it is precisely at that depth that the foundations have been laid. This was further confirmed by an examination of the excavations that the Committee caused to be made at and below the level of the foundations at the north-east and south-east corners, where the cabook was found to be wanting in homogeneity, loose in structure, being easily picked out with the finger, and greasy to the touch when wet, The friction to be overcome in moving a weight resting on this slippery bed would, in their opinion, be comparatively small; and the coefficient of friction may be taken in this case the same as that for stone on wet clay.

15. The Committee have given due consideration to the facts, theories, and opinions of the witnesses in regard to the causes of the three successive failures.

16. In regard to the first failure, they note the opinion of the Waterworks engineers, that the failure was brought about by the pressure of the superincumbent water acting on the angular benching then under self-contained tension, and causing the benching to crack; that water percolated through these cracks, undermined the foundation of the east wall, and caused its displacement. The Chief Resident Engineer's statement, that the gaugings prove that there was no leakage through the floor of the Reservoir, has also been given attentive consideration.

17. The Committee are unable to attach the same weight to the records of the gaugings as is done by the Chief Resident Engineer. The estimation of the delivery by eye, the inequality of the pressure at the source of supply in October, 1885, and other incidental elements of inaccuracy do not permit of exactitude of result. Calculations based on such unreliable data can, of their nature, be only approximate. The Committee are obliged to look for other circumstances to explain the discrepancy that undoubtedly existed between the amount of water delivered into and the amount held up by the Reservoir.

18. Actual experiment, the direct evidence of one of the witnesses, and the opinions of others prove that the sand concrete and its cement facing used in the flooring is permeable to water even when not under pressure. In view of this fact, the Committee regard the loss of water as due to the permeability of the flooring. They are of opinion that water percolated through the flooring, undermined the foundation, and caused the displacement of the east wall; that this displacement of the east wall in its turn caused a "drag" on the flooring at the base of the south wall, particularly at the south-east angle—a wrench which is manifested by the nature and direction of the cracks. They are constrained to believe that the rupture in the east wall was antecedent to the cracks in the flooring.

19. In regard to the second failure, the Committee note, that while the Chief Resident Engineer ascribes it again to cross strain on the footings (which had replaced the benching after the first failure) operated by the pressure of the superincumbent water, the Assistant Resident Engineer propounds a temperature theory to account for the rupture. The Committee are of opinion, from the circumstance of the cracks manifesting themselves all round the Reservoir, and at a varying distance from the walls, that they are really the effects of the tendency of the Reservoir to rupture at the angles, and not due to the tensional strain to which they are ascribed by the Chief Resident Engineer. The theory advanced by the Assistant Engineer, that the cracks were induced by contraction due to the temperature of the water on admission being different to that of the cement rendering, cannot be maintained in the opinion of the Committee, as the temperature of the water on admission into the Reservoir does not differ materially from the ordinary shade temperatures. Its warmness, in fact, is a matter of every-day comment.

20. In regard to the third failure, the Waterworks engineers ascribe it to effects of temperature unequally affecting the walls, and suggest that the weakness at the north-east angle may be due to the east wall being heated by the sun's rays, while the north remains cool owing to its being protected from those rays.

21. The Committee find themselves forced to reject this theory absolutely. In the first place, the conditions to which the Reservoir is exposed in respect to the influence of the sun's rays do not differ from those of any other building. Indeed, from the Reservoir being constructed of a single

material—concrete—it has great advantages over structures into which materials of different coefficients of expansion (*e.g.*, wood, iron, &c.) enter. Besides the one material of which it is constructed, its regular form gives it a decided advantage in respect of expansion and contraction over almost any other kind of building that can be instanced, as under influences of temperature it is free to expand or contract in all directions; while the careful and deliberate mode of its construction, and the time that has elapsed between its completion and filling, should have allowed of the accommodation in its mass of any alterations due to such influences. In the second place, in the latitude of Colombo (6° 53′ N.) the walls of the structure are, from their batter, so placed that they are presented pretty equally all round to the solar rays throughout the year, the sun being for five months of the year north of the Reservoir, and seven months to the south, and to all intents and purposes having a general vertical position during the highest temperature of the day.

22. The Committee ascribe, on the other hand, the third failure chiefly to lightness of design. From the calculations* that the Committee have caused to be made with regard to the equilibrium of the east wall, considered apart from the backing, it is apparent that, theoretically, the resultant of the pressures passes outside "the middle third," before the Reservoir is holding up its full complement of water. As the water rises higher, the cohesion of the walls and flooring comes into play to resist the pressure, and lastly the cabook backing at the foot of the wall. Had this backing been of rock, the resistance that such a medium offers would have helped the wall to withstand the pressure, but cabook being yielding in its character, it gave slightly, and the wall was displaced horizontally on its foundation with a rent from cornice to foundation, and the flooring was torn through its double thickness.

23. It will be seen from the diagram showing the fractures accompanying this third failure, that the structure yielded at the north-east corner and on the south wall about 35 ft. from the south-east corner, and that the rent through the floor took its direction from north to south parallel with and east of the first line of columns for about half the length of the Reservoir, and then passed to the west of the first line of columns. Besides these fractures there are other indications of mischief not shown on the diagram. The tie-rods of the northern half of the easternmost arching are buckled, the arching cracked, and the top of the parapet of the east wall broken lengthwise; there is also a vertical crack through the east wall extending up many courses, and shown in plan on the diagram.

24. The Committee consider that the following explanation probably gives the sequence of events that happened on the occasion of this failure. When the walls were no longer able to bear the pressure of the water, and the cohesion between walls and between floor and walls had been overcome, the weakest east wall, not receiving rigid support from the backing, slipped horizontally on its foundation. Several forces operated to check the movement of the wall—(1) the resistance of the backing after its first slight compression; (2) the resistance of the tie-rods; (3) the "anchoring" down of the southern half of the flooring by the columns; (4) the additional weight of 35 ft. of the south wall; and (5) the relief given by the water escaping through the fractures and through the waste-pipe. All these several impediments to motion helped to save the wall from destruction. The compression of the cabook backing and its resistance cannot be measured. The resistance of twenty-six tie-rods of wrought iron, one inch in diameter, has some slight value. The resistance due to the "anchoring" of the flooring by the columns cannot be measured. The additional weight of the broken part of the south wall may be taken at 800 tons. The relief given by the escaping water may be judged, from the rate at which it fell, viz., about 5 ft. in the first hour, equal to 5,060 tons in the hour, or about 84 tons in the minute.

25. From the estimation of the width of the cracks by observers at the time, and from the subsequent alterations thereof after intervals of time as determined by actual measurement, it is apparent that the cracks in the broken walls, after being relieved of the pressure of water, came closer together again.

26. The evidence tends to show that the rupture commenced at the north-east corner, where the crack occurred at the time of the first failure. However carefully this crack may have been examined and repaired, it is a matter of extreme difficulty, if not impossibility, to detect the extent of the damage that, while not apparent to the eye or ordinary tests, may yet lurk hidden in the body of the wall. The south-east angle did not "give," as that appears to have been satisfactorily repaired after the first failure, but the wall yielded at the nearest and weakest point—in the panel above the stepping in the foundation. The crack in the middle of the east wall was probably brought about by the twisting strain produced by the two consecutive breaks.

27. The Committee therefore consider that the inference to be drawn from the whole of the failures, and the cause to which the failures may be ascribed, is, that *the design and foundation are not suitable to each other*. A design which has failed on a cabook foundation might have been perfectly successful on a foundation of a different character; and, conversely, a reservoir of different design and equal capacity might have been safely constructed on the site chosen.

28. That the foundation on Máligákanda hill is treacherous is plain from the evidence of the witnesses, the character of the borings, the cracks in the walls occurring at an early period of the construction, and the observations that the Committee have made during the course of their inquiry. The foundation chosen was unfortunately a stratum of cabook that becomes slippery when wet, and is known locally as bad cabook. The cabook backing of the walls generally, and of the east wall in particular, is of a yielding nature, and where for the safety of the structure rigidity or incompressibility was essential, the opposite quality of compressibility is found. The east wall

* The elements used in the calculation by Mr. A. E. Wackrill, formerly of the Royal Indian Civil Engineering College, Cooper's Hill, and now Trigonometrical Assistant to the Surveyor-General, are the same as those employed by Mr. Burnett, viz., a typical wall having a section equal to the mean between buttress and panels, and with a specific gravity of 2·2 for the concrete. (See Appendices F and G, and Plans G 1 and G 2.)

is the weakest, as it has less solid backing than the others; the north wall, which most nearly approaches it in this respect, has the inlet-tower as an additional buttress. The east wall was, therefore, the one that, as might be expected, gave way.

29. As regards the design, the Committee find—(1) that such a "light" design is unsuited generally to the particular formation of Máligákanda hill and the part of the hill which was selected for the site; (2) that the flooring before the first failure was certainly too light, and possibly may be so still; (3) that in the particular case of this cabook, the design of the flooring at a lower level than the walls, and of the stepping of the south wall where it meets the east wall, is defective; (4) that, as the thickness of flooring designed is the minimum theoretically allowed under the best circumstances, in the particular case of this cabook, where infiltration of water into the foundation is fatal, the proportion of cement in the concrete of the flooring is unsuitable; (5) in the particular case of cabook, the walls would have been more stable had the batter been carried down to the foundations.

30. It is not within the scope of the inquiry to suggest a mode by which the Reservoir can be made serviceable; but the Committee desire to record the opinion, that the structure is not beyond repair, and that it can still be made available as a Service Reservoir.

31. The Committee attach to this report the minutes of evidence, various illustrative diagrams, returns of gaugings, dimensions of cracks, composition of the concrete in the flooring and walls, determinations of the specific gravity of the concrete used for the hearting, cement testings* by the Resident Engineer, &c., and specimens of the cabook underlying the foundations (which should be soaked before being experimented upon), and of the floorings and hearting of the walls.

F. C. H. CLARKE.
HENRY BOIS.
H. S. CLIVE.
R. K. MACBRIDE

Colombo, *April* 28, 1887.

* It was the Committee's desire to submit all varieties of the cement used in the work to chemical analysis, but the whole of the cement had been used up, and therefore it was impossible to carry out this intention.

MINUTES OF EVIDENCE.

Saturday, March 12, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

First Witness.—A. W. BURNETT, Esq., M.I.C.E., Chief Resident Engineer, Colombo Waterworks, examined, states:—

I have been the Chief Resident Engineer of the Maligakanda Reservoir from the time that its construction was undertaken. The design and plans of the Reservoir were drawn by Mr. Bateman, upon information that I supplied to him after my first visit to the Island in 1874. I gave him full particulars as to the site and as to the nature of the cabook formation which characterises the hill at Maligakanda. I took no borings. I intended to have taken trial pits, but on going to the ground found that there were a series of cabook pits from the top of the hill down to the foot on the east side and at the north-easterly corner. There were also wells in the north easterly corner, and from these pits and wells I found that the cabook existed in unbroken strata, and of firm quality, from the top of the hill to the bottom. I examined the hill generally all over. I selected the present site for the Reservoir in 1874, in the belief that it was the only portion of the Maligakanda hill that was at that time available. Afterwards, when I became aware that the adjoining land was available, it did not occur to me to alter the site; it did not present itself to me as a matter that could be entertained. I saw no reason to alter the existing site, with which I was quite satisfied. I think now that (speaking after what has happened) a better site could possibly have been selected. Had the whole place been open and unenclosed, I should naturally have gone to the flattest part of it. I think there was sufficient room between the toe of the east wall and the edge of the hill to be well within solid ground. If a different site on another part of the hill had been selected to the present in 1882, it would not have entailed an alteration in design. I have had experience of works constructed on somewhat similar foundations, such as clay. I have built straining tanks 30 ft. high, on clay, at Denton. These tanks were of brick, and above ground on three sides. I have been concerned in works which, in respect to the weight of the walls on the foundation and the sub-soil, have analogy with the works at Maligakanda. Although I submitted to Mr. Bateman, after my first visit to Ceylon, a sketch and estimate for the construction of the Reservoir, I had no hand in the design of the works, and saw none of the plans until they were put into my hands by the Crown Agents in 1881. They were not submitted for my consideration, but I had occasion to express my opinion on a minor point. I pointed out incidentally that there were certain points in connection with the open arches and iron columns with which I was not satisfied. I considered that it was my duty to accept the design as given me by Mr. Bateman; but, of course, had there been any part of the design to my mind seriously wrong, it would have been my duty to bring it to the notice of Mr. Bateman. The opinion that I expressed about the columns and arches was, that the columns would be better if stayed, and the arches kept entirely distinct from the side walls, and the junction between the roof and wall made by a lead flashing with the object of taking all thrust off the wall. The Reservoir as designed by Mr. Bateman was strictly followed, with the exception of the lower part of the walls, in which alteration was made. In the original design there was a benching all round the inside of the reservoir. The alteration that I made was to omit the benching on the north and east sides. The alterations made were those which I conceive were authorised by the specification. The Consulting Engineer has never expressed his disapproval of the alterations. I think, after the experience of the first break, that the benching was a source of weakness in the design. I believe it to have been the cause of the first crack in October, 1885. I think that such a radical alteration as the removal of the benching on the north and east walls was within the terms of the specification.

Adjourned to Tuesday, March 15, 1887, 2 P.M. Subsequently postponed to Wednesday, March 16, 1887, at the same hour.

Wednesday, March 16, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

The Chief Resident Engineer hands in the entire correspondence that has passed between his office and the authorities with reference to the three failures of the Maligakanda Reservoir; also a copy of the contract drawn by the Crown Agents, and the composition of the concrete used in the works. (See Appendix A.)

A. W. BURNETT, Esq. (examination continued).

I deemed it desirable to carry down the foundation lower than shown in the original design at the time the foundations were being excavated. Finding there were numerous pits, I struck the bottom of the lowest pit, and carried the foundation down to that level. I did not widen the foundation.

Q.—Is it not the case that the lower the foundations are carried down, preserving the same width, the greater the tendency to topple, owing to the line of pressure being thrown more and more outwards?

A.—Yes, subject to the strength of the backing of the wall. In some cases there was as much as 5 ft. of solid cabook in contact with the toe of the wall. The concrete, as a general rule, was filled into the excavation without the intervention of boarding.

Q.—Given the foundations such as they are, do you consider the original design a suitable one?

A.—Personally, I consider the section a light one compared to a heavy section, but I did not and do not consider the walls as they are too light for the work they have to do under ordinary circumstances. I refer to climate as being liable to produce abnormal conditions.

Q.—Do you approve of the original design and construction of the floor of the Reservoir at a lower level than the walls by 5 ft. and 1½ ft. respectively on the south and east sides, seeing that the foundation is cabook?

A.—I should prefer the work designed so that the bottom of the flooring is not below the level of the walls; but I see no special danger in the proposed construction.

Q.—Is it not the case that moisture percolates through cabook, that cabook is much seamed, and that under unfavourable conditions its yielding nature necessitates that the foundations should be formed by deep and broad excavations?

A.—Water percolates through cabook freely. The particular cabook on Maligakanda hill is compact, and almost uniform throughout in its structure. I did not notice any seams. The foundations should be so designed as to suit the individual case which they have to meet, with due regard to the weight of the structure and the load the foundation will carry.

Q.—How was the operation of laying the floor carried out?

A.—In the first instance the excavations were taken down to about 18 in. from the bottom, dressed off to the finished slope, and a drain cut running east and west at the lowest depth. The floor and the walls were not laid simultaneously; the walls were first laid. When the excavations were cut to 18 in. as before stated, the site of the walls was roofed in all round, and the remaining 18 in. in depth was taken out day by day sufficient for the day's work, and concrete foundation immediately put in. In putting in the concrete foundation of the walls a strip of the flooring immediately under the face of the wall, and projecting about 12 in. on the average inwards to the Reservoir, was also laid. The walls were carried out in this way to about ground level. The pillar-bases were put in separately. After the walls had been put in all round, and all the pillar bases were in, each square of flooring between each set of four pillars was taken out to the bottom level and lined with 3 in. or 4 in. of concrete. The walls were then completed, the iron columns erected, both sets of arches turned, and, after the whole weight was on the walls and column bases, the original 4 in. of flooring was examined, picked up where necessary, and completed to the full depth of 12 in. The flooring and pillar bases are formed of 4 to 1 sand concrete. The bulk of the walls is 6 to 1 stone and sand, faced with 4 to 1 sand and cement blocks. The size of the facing blocks is 10 in. on bed and 8 in. deep and 20 in. long, and they are laid with three courses of stretchers to one of headers. When the thickness of flooring was increased after the first accident, the extra 12 in. was laid as follows:—The work was brought forward in two 6 in. layers, the lower being kept six or seven yards in front of the upper. When it was finished, it was set with a cement facing on top. The walls were built up in even layers.

Q.—Are you aware that water percolated through the floor?

A.—It is my opinion that no percolation occurred through the body of the flooring.

Adjourned to Thursday, March 17, 1887, 10 A.M.

Thursday, March 17, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

A. W. BURNETT, Esq. (examination continued).

Q.—When you first inspected the site, did you find the ground on the east side and at the north-east corner more pitted with old cabook pits than on the north side?

A.—There were more pits on the east side than on the north, but the difference in this respect was slight.

Q.—Assuming the floor of the foundation to be equally good on the north and east sides, do you consider the resistance of the vertical face of the excavation as less on the east than on the north side?

A.—The excavation on the north side is on an average 3 ft. deeper in the solid than on the east side, and to that extent the resistance is greater on the north side.

Q.—Do you consider it good in design or construction to have made the bottom of the Reservoir 5 ft. below the foundations of the walls, when those walls were on cabook, and only a skin (1 ft.) of cement plaster (or concrete, as the case may be) to keep the water at a pressure of 40 ft. head from getting under the bottom?

A.—I would rather not answer the question.

Q.—To what cause or causes do you attribute the failure of October, 1885?

A.—My belief is, that the failure began with the angular cracks at the foot of the south benching, due to the strain on the angle in the flooring at the foot of the benching, the crack extending along the foot of the south benching. The strain that I speak of was a cross strain, due to the angle between benching and floor, brought into operation by the additional pressure of the water. From these cracks leakage went on for two days, soaking the foot of the east wall. Upon this there was a strain, which caused a separation through the south east corner of the Reservoir wall. This separation was accompanied by a crack along the foot of the east wall, extending to the north-east angle.

Q.—What repairs and additions were made, and with what object?

A.—Believing the angles in the benching and floor to be a source of weakness, I proposed to do away with them all round by putting in a curved or sloping footing to the walls, and to increase the thickness of the junction between the floor and walls. I also proposed to double the thickness of the floor all over, as a matter of precaution. I further proposed to deepen the foundation of the floor in the south east corner, to repair the south-east corner where the wall was broken, by cutting it through and re-making it with new concrete, and, having regard to any possible strain that the foundation of the east wall might have received, though before intact, I proposed to put out five big buttresses along the outer foot of the wall. The repairs that I suggested were not in all cases carried out. The Consulting Engineer objected altogether to the buttresses as unnecessary, and also to the thickening of the floor lining as also unnecessary. With regard to the curved footing he expressed no opinion. Correspondence went on with regard to these points, but without result. Finally, Sir John Fowler, having heard of the accident while in Australia, inspected the Reservoir when passing through Colombo. He saw the plans; he did not approve of the buttresses, but strongly advised the additional thickness of flooring and the curved footings. He afterwards saw Mr. Bateman in England, and also allowed me to refer to him in my official report. Finally, I proposed the repairs as they were subsequently carried out, viz., the additional flooring, the curved footings, and underpinning of the wall, and gave up the buttresses. These repairs were agreed to.

Q.—What was your reason, after the first failure, for removing the benching?

A.—Because I consider the angles in the benching to be sources of weakness.

Q.—Why did underpinning the walls recommend itself to you as the best form of repair after the first failure?

A.—In order, along the east side to cut out and ensure the removal of all material that might have been damaged by the leakage, and to bond and make the junction between the new footing and old wall as secure as possible.

Q.—If you considered it possible that any water could have passed below the bottom of the wall, and for that reason decided on underpinning, why did you not underpin through instead of partially?

A.—The underpinning was done where the water had gone through the foundation. Where there was no crack in the floor, the underpinning was carried round to bond in the old wall.

Q.—Do the sections show the underpinning precisely as it was laid, or do they show its average section?

A.—There is no underpinning on the north wall. The section of the west wall holds good for the whole of the west wall, that of the south wall for that wall, while the underpinning on the east wall varies, the section showing about the mean for the whole length of the wall. The thickness on the east wall goes up to from 3 ft. to 4 ft., but in one place it was only 1 ft. 9 in.

Q.—Was the concrete for underpinning put in to its full depth at one operation?

A.—No. It was first laid to within 9 in. vertically of the foot of the wall, then, after a day's interval, the junction was made with 4 to 1 stuff.

Q.—In conducting the work of underpinning, did you take any steps to guard against your new concrete expanding?

A.—Not beyond what I have just mentioned.

Q.—Are you aware that the expansion of concrete has been made use of by engineers to raise walls which have "settled," by underpinning them?

A.—No.

Q.—What was the specified breaking weight of your cement?

A.—On cement, I think 700 lb. on the briquette of 2¼ sq. in.; it is not given in the specification.

Q.—What firms supplied the cement?

A.—The names are given on the returns handed in. (See Appendix B.)

Q.—Where and how was the cement in barrels stored?

A.—In different stores in the town and at Maligakanda by the Colonial Storekeeper.

Q.—What was its specified weight per bushel, and did your cement agree with this?

A.—No specifications or instructions as to this. The weight was to be 400 lb. net per barrel, and this was so by invoices.

Q.—Was the cement spread out and allowed to "cool" before being used, or was it used straight from the barrel?

A.—From the barrel direct,—all was from twelve to eighteen months old.

Q.—No seven-day tests come up to the War Office specification of 400 lb. per square inch, and as they did not always come up to your own specification, I presume you relaxed the rule. What tensile strain did you pass?

A.—I consider that 450 lb. to 550 lb. on the 2¼ sq. in. after seven days was ample.

Q.—Was the cement that had become caked in the barrels altogether rejected, or was it used in the work?

A.—My test was rubbing with the finger and thumb; if it went to powder, and was not gritty like sand, I gave orders that it should be used, otherwise I sieved it over and rejected what would not pass through.

Q.—Did your contractor, Mr. Mitchell, ever make objections to the quality of the cement?

A.—Yes. He called my attention two or three times to barrels that had been damaged.

Q.—Were not the foundations of the south and east sides seriously affected by the water penetrating under the walls when the first failure occurred?

A.—No.

Q.—Is it not admitted that under conditions such as the over weighting of a floor water will filter through cement concrete or cement mortar?

A.—Water under sufficient pressure will go through any mortar or any concrete that was ever put together.

Q.—Do you consider that filtration such as I speak of took place before the occurrence of the first failure?

A.—I am satisfied that it did not, and I may state that the gaugings prove that it did not. I hand in tables of the gaugings taken at the time of the three failures. (See Appendix C (*a*), (*b*), (*c*).

Q.—Did Mr. Mitchell ever express any distrust as to the foundations?

A.—Never.

Adjourned to Friday, March 18, 1887, 10 A.M.

Friday, March 18, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

The Chief Resident Engineer hands in two photographs, the duplicates of which were sent to the Consulting Engineer in June, 1883, showing the detailed manner in which the works were carried out.

A. W. BURNETT, Esq. (examination continued).

Q.—Have you any data derived from experience to show what pressure a similar 12 in. concrete flooring will bear without becoming permeable to water?

A.—At Batley, in Yorkshire, there is a 12 in. flooring carrying 28 ft. of water. This reservoir has been water tight since its construction about ten years ago. The Maligakanda Reservoir has a coating of neat cement, ½ in. in thickness, put on while the work was still green. At Batley the flooring rests on sandstone rock. For a depth of water of 20 ft. to 40 ft., a flooring of 9 in. to 12 in. is generally considered sufficient.

Q.—Have you made any calculation as to where the resultant of the pressures due to a height of water in the Reservoir of 24½ ft. would pass; and, if so, will you furnish them to the Committee?

A.—I have not, but will furnish the information.

Q.—Do you consider, generally speaking, that the form of the Reservoir, with its sharp angles and corners, is objectionable?

A.—Generally speaking, no.

Q.—Seeing that you have altered the original form of the Reservoir by putting in curved footings, and removing to a great extent the angular form between adjacent walls, how do you reconcile this fact with your answer just given, that the original form was unobjectionable?

A.—I consider that the original form is, generally speaking, unobjectionable; but as practical experience in

this particular case had shown me that angles were causes of weakness, I sought to remedy the weakness by removing the angular corners as much as possible.

Q.—To what cause or causes do you attribute the second failure of December, 1886?

A.—I believe that the strains that were developed were more or less due to a similiar cause as on the first failure. They took place as a general level at the point of the curved footing, where the change from vertical to horizontal pressure is most acute, and were, I believe, caused by a change in the direction of the strain. The actual effect of the water pressure on the curved footing would tend to develop a tension strain like a bursting pressure, and with the initial strain in the concrete of setting a very modified cross strain would be set up, which caused the break.

Q.—What repairs and additions were made, and with what object?

A.—The cracks were opened out all round, and were found for the greater part of the distance only to extend through the cement facing. In some isolated places they extended for an inch or an inch and a half into the facing up of the concrete, and along the south side to an average depth of 1½ in., with an occasional short length for an inch deeper (*i.e.*, 2½ in.). These deeper places were found to have occurred where the angles left in putting in the steep part of the footing had been faced up to the line of the curve for the cement rendering. My idea in carrying out the repairs was to set free the slight strains shown to exist in the steep part of the curve, by cutting shallow horizontal grooves in the face so as to break the continuous line. These grooves were cut into the original concrete, were re-faced over with a mixture of one part cement to one of sand, leaving a groove varying from 1½ in. to 3 in. deep. As a further precaution I lined over the whole area on which strains had developed with ¾ in. thickness of asphalt, filling in the grooves.

Q.—Seeing that the cracks did not go through the concrete, or rather did not penetrate beyond 2½ in., how do you account for the loss of water shown by the gaugings?

A.—On the breaking of the cement skin the water would be absorbed into the mass of the concrete. When the water was 29 ft. 4 in. deep the Reservoir was tested, and found to be losing water at the rate of one-fourth inch in depth per hour. If the whole of this loss were concentrated on the 160 ft. length of crack on the south side the quantity would be less than half a gallon per minute per lineal foot. The leakage was so small, and the injuries so slight, that had it been possible to know the facts without emptying the Reservoir, and had the foundations been a rock foundation, and one which would not become tender from water, I would have allowed it to continue; and judging by experience at other places, my opinion is that the leakage would have entirely ceased in the course of a few months if not of a few weeks.

Q.—To what cause do you attribute the third failure of February, 1887?

A.—In answering this question I should like to follow the history of this failure from the commencement. The observed facts are these:—

A little before 4 o'clock on February 16, the north-east corner, without any warning of weakness anywhere, and when the gaugings show that the Reservoir was water-tight, began suddenly to give way from the top of the wall downwards. The inspector (Mr. Wyllie) thereupon opened the valve of the waste sluice, and wrote a hurried note to call me from my house. This crack in the north-east corner was followed (according to the report of the inspector), some six or seven minutes later, by a break in the south wall some 35 ft. from the easterly angle, occurring in much the same manner. After that crack had taken place, and the inspector had gone to look at it, he reports that he went along the east wall, but saw no indication of a crack, and thence passed on to the north-east corner, where he describes the crack in the north wall as having by that time reached to the ground. I arrived on the ground about half an hour or forty minutes after the first crack had taken place (as nearly as I could judge), and went straight to the south-wall. When I arrived there, the water was coming out from the top of the wall to the bottom. I examined the crack as closely as possible, and judged it at the foot to be three-eighths of an inch wide, and considerably more at the top, looking against the skyline. The water was then coming out through the cornice on the top of the wall. I then proceeded along the face of the east wall, carefully examining it. I also examined the trial hole sunk about the centre of that wall, and there was no trace of moisture or water at any point. I then went to the crack at the north-east corner and examined that closely. The water was then coming out from the whole depth of the wall, and still coming out from the lower part of the upper member of the string-course. I judged this crack to be about the same dimensions as that of the south wall. With regard to the dimensions of the crack in the top of the wall at both places, I could only judge this standing side by side with the water flowing through the crack and looking up vertically and getting it against the skyline. The crack was, therefore, seen by me through the issuing water, and, I believe, on after-consideration, that it appeared bigger than it really was. I then proceeded to the top of the Reservoir and passed along the parapet nearly to the north-east crack, but did not go up to it, as I saw the water was getting into the gardens of the houses below. I went down and endeavoured to divert the water that was escaping, and it was some little time after this that, when making another examination along the east wall and at the trial hole, no water appearing anywhere, I think I first saw a crack in the east wall. After that I followed the escaping water to see if any damage was being done to the houses, and carefully examined the slopes of the hill, but saw no water anywhere, except the two streams flowing from the two cracks. I remained on the ground till past 7 o'clock. When I left, about 9 ft. or 10 ft. of water had gone out of the Reservoir. The maximum dimension of the top of the crack, as I estimated, might be from ¾ in. to 1¼ in. When the Reservoir was emptied by the following morning, it was found that the cracks in the north-east corner of the wall and the south wall were joined across the floor of the Reservoir by a crack running partly on the east side and partly on the west side of the most easterly line of columns. Measurements have been taken of these cracks, of which I hand in a table. (See Appendix D.) Levels were taken on the morning after the accident, and as soon as the Reservoir was empty, to permanent iron pins (fixed in the north and east walls since June, 1886), on which a series of levels have been taken since that date to the same local bench mark inside. The results show that no settlement or subsidence of any part of the structure has taken place. I hand in these levels. (See Appendix E.) I account for the absence of water issuing from below the east wall to the circumstance that any water escaping through the floor would be absorbed by the cabook immediately underneath. There was no crack, movement or settlement in the cabook under the flooring. Had there been such, in my opinion, and after the experience I have had, the east end of the Reservoir and hill would have been washed to the bottom. As to the cause of the third failure, I conclude, on the evidence of the facts stated, that the accident is in no way attributable to any weakness, subsidence, or overweighting of the foundations, which have thus stood without a shake the shock of the break of a mass of masonry of 8,400 tons weight. I also consider that the walls as they exist are, theoretically, sufficient for the work they have to do. Had they not been so, my opinion is, that, instead of a break through the very strongest part of the whole structure, where the sectional area of the wall bears a ratio of about 7½ to 5 of the slighter portions of the work, the walls would have split on the different faces at the weakest places, viz., in the panels. The actual break, judging from the evidence at my disposal, commenced in the north-east corner, and the sequence of events I believe to have been as follows:—On the split taking place in the north-east corner there would be a recoil on the east wall thus suddenly set free, and being set loose at the north-east corner there would be a tendency with the pressure on it to swing over to the south-east. The strain was thus brought upon the south-east corner, the east wall itself remaining unbroken, and then, as might be expected, assuming a breaking strain, this took place at the weakest part, where it would necessarily act first, viz., through the most easterly edge of the first panel of the south wall. The east wall was then set free at the south corner, and that corner had an equal tendency to swing off. The effect of these two consecutive breaks would be to put on a sort of twisting strain on the centre of the east wall, first throwing out the north-east corner and then the south-east corner, the effect of which would be to cause a strain in the centre of the east wall, which also took effect at the weakest point nearest the centre,—not through the centre buttress, but at the nearest end of one of the adjoining panels.

Adjourned to Tuesday, March 22, 1887, 10 A.M.

Tuesday, March 22, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman*.
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

The Chief Resident Engineer hands in the figure showing the position of the resultant due to the 24½ feet of water, asked for at the last Meeting, and a section showing the pressures on the footing.

A. W. BURNETT, Esq. (examination continued).

Taking now the results that are found, I would reason from them alone in this way. The work done at the cracks,—*i. e.*, the effect brought about at the cracks—must be in proportion to the strain that was acting on the walls. The greatest strain would be immediately before the first effect was caused, and lesser effects would follow, because, in my view, if all the effects were produced simultaneously, the force that was sufficient to entirely break throughout the north-east corner, with a total sectional area at that point of nine compared to five in the panels of the east wall, must have entirely destroyed that wall; or, if it is conceived that the centre of the east wall first gave way, it would appear that a force, that only partially cracked the sectional area of five in the east wall, could be transmitted through the damaged wall, and then destroyed an area of nine. I therefore conclude from the effect that we see, that there was some such sequence in the events as the evidence available seems to indicate. The facts to be dealt with are these:—The mass of broken wall is 8,400 tons: the whole available water pressure against it to a level of 33 ft. below the surface is 2,900 tons; the area of the wall in the north-east corner, where the fracture occurred, including the inside angle filling, is about 900 sq. ft. Taking the breaking strain at 10 tons on the square foot, or 155 lb. on the square inch, on the concrete from two to three years old, the total force required to break it would be 9,000 tons. There must, therefore, either have been some increase of force beyond that existing,—a supposition which would appear impossible,—or the north-east corner must have been in some way weakened. The possibility crossed my mind that that corner might have received some undeveloped strain at the time of the first accident. But the direction in which the crack has gone through the wall in the present instance is north of the corner; the slight face crack that was shown on the first accident went east of the corner. From the excavations made and tests undertaken by means of water-pockets at the time of the repair after the first accident, I was satisfied that all damage, which was presumably a purely face crack, was cut out and made good, and the angle filling was put in and tied into the old wall, the base of the wall being also underpinned. It is difficult to suggest what can have caused the weakness at this corner. But there is a cause, which I advance with all deference, as to the possible action at this place. In the early morning, as the sun rises it strikes full on the south-east corner and east wall, and within an hour or an hour and a half there is a rise in temperature on the face of the wall of from 30° to 40° Fahrenheit; at such times the face of the wall strikes hot to the hand, while the dew is still wet on the inner face of it. Taking the theoretical expansion of masonry at ·001 for 180° of temperature Fahrenheit, for a difference of 30° of temperature on the outside length of the wall at the top, the expansion and contraction would be ·40 of an inch. That would suppose that the whole mass of the wall was altered to that extent in temperature. But as the outer face only is under the influence of the sun's rays, the inner face practically does not alter, and is therefore held rigid, so that the strain, whatever it may be, due to the alteration of temperature, has to be accommodated in the mass of the wall. The whole structure, of course, during the course of the day, is submitted to like influence of temperature; but it is possible that there may be a more acute effect on the north-east corner, inasmuch as the east face of the wall in the morning has to endure the full effects of the rise and fall of temperature within a period of one to one and a half hour, while there is hardly any appreciable effect on the north wall, the dew being wet on the face of that wall when the full effect of the morning sun is felt on the east. With regard to the rest of the structure the variations in temperature are more gradual, the full effect of the sun not reaching the west wall until about 11 o'clock. Thus, therefore, there is a longer time for the structure on the other three sides to accommodate itself to the strain. It has occurred to me as possible that this constant morning strain, slight as it may be to the north-east corner, but which I consider more acute at this place than at any other part of the structure, for reasons I have given, may have caused a strain in the corner, which, on the filling of the Reservoir, induced the fracture: the effect of the filling being to keep the inside of the wall even in temperature, and therefore more rigid, with the effect of the actual pressure of the water itself in addition.

Q.—Is it not the case that in countries of a greater range of temperature, like Canada and India, works have stood many years?

A.—As a general rule it is so; but in the present instance the Reservoir has been submitted, I think, to more trying circumstances.

Q.—Should not this variation of temperature and the effects to which it may give rise have been foreseen and provided for in the margin of safety allowed to all works?

A.—Certainly; and previous to this last accident I considered that there was margin. With the experience I now have, I would never expose the walls of a reservoir in countries where there is so much variation of temperature as this without protecting it with a covering of earth.

Q.—In working up from the foundation of the east wall to join on to the foundation of the south wall, the sections show that you worked up by steps, the former wall being on a lower level than the latter. Do you not consider that this must have caused weakness at that particular part of the south wall, where, in fact, a through fracture took place in February last?

A.—I do not consider that there is any structural defect due to that stepping.

In answer to further questions, Mr. Burnett attaches no value to the tension of the tie-rods, nor does he consider that there is any appreciable thrust on the wall due to the arches. In conclusion, he states:—

I should like to draw especial attention to the following circumstances, showing that the wall was capable of supporting more than the pressure it had to bear. After the east wall was entirely separated from the north and south walls at the corners, and was partially cracked itself in the middle, it was then sustaining within three or four inches of the full pressure in the reservoir previous to the break, and yet stood perfectly stable by itself. In my opinion, had the Reservoir given way from weakness in the wall in the first instance, the moment the wall was set free and half broken it would have been demolished.

I hand in a diagram showing the position of the resultant with the Reservoir full (see Plan E), with the following explanation:—

The blue lines and writing show the direction and intensity of the pressures on the inside footings of the walls with the Reservoir full.

The maximum horizontal pressure against the wall is at the top of the curved footing, giving a resultant point of pressure shown by the end of the outer red line of pressures.

The curve of the footing inside the wall at once deflects this horizontal pressure radial to the face through the base of the wall without any additional horizontal thrust whatever, and brings down and inward the resultant line of pressure, the base of the wall only requiring to transmit the pressure to the foundations.

The next and following additional foot of pressure is transmitted wholly through the inner half of the wall foundation. Thus there is not only no additional horizontal thrust below the top of the footing, but the pressure tends to hold down the wall on the inner edge.

Adjourned to Wednesday, March 23, 1887, 10 A.M.

Wednesday, March 23, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Second Witness.—H. EWART, Esq., A.M.I.C.E., examined, states:—

I was appointed an Assistant Engineer of the Colombo Waterworks from the time they were commenced. I was not associated with Mr. Burnett at the time the site of the works was chosen. I did not examine the Maligakanda site before the foundations were excavated. At the time of the excavation I examined the quality of the cabook and found it to be such as is found underlying the cabook usually employed for building purposes. This building cabook is, generally speaking, the uppermost stratum of the cabook formation. We did not make any borings or examine the substance of the hill below the foundations. After they were commenced the excavations for the foundations were in every part carried down until we reached the undisturbed compact cabook. Its consistency was slightly firmer than that of the London clay. Cabook differs from the London clay in that it allows percolation of water freely. I have no previous experience of works on soils analogous to that of the Maligakanda site. I have had experience of building on clay foundations; the works were service reservoirs for the Manchester Waterworks.

Q.—From what you know of cabook soil, do you consider that any special precautions should be taken in designing a building to stand upon it?

A.—No; I think that cabook will carry as great a weight as clay, and that it will stand at a steeper slope, or even in a cutting with vertical sides. I consider that cabook will safely carry a weight of three to four tons per square foot. This, however, is mere surmise, as I have never tested the point.

Q.—Was the original design of the works adhered to?

A.—The excavation for the foundations were carried to a greater depth than that shown on the contract plans.

Q.—Do you know why?

A.—On account of the level at which the solid cabook was found on opening the ground.

Q.—Was that the only departure from the original design?

A.—No; the benching, which in the contract plan was shown all round the Reservoir, was only made on two sides, the south and west sides, and was widened to 7 ft. from the base of the wall, the original design being 3 ft., or 3 ft. 6 in.

Q.—With what object were these alterations made?

A.—The foundations of the north and east walls being carried to the level of the bottom of the Reservoir, the object for which the benching was designed ceased to exist; on the south and west sides the benching was widened, in order to keep the weight of the wall further from the edge of the slope of the cutting.

Q.—Do you think that the omission of the benching on the north and east walls lessened the stability of those walls?

A.—Considering the nature of the cabook of which the benching would have been formed on those sides, I do not think it would have strengthened the walls materially, there being a number of cabook pits and much loose material along the line of the benching.

Q.—Do you consider that the removal of the benching increased the stability of the walls?

A.—I do not think that the removal of the benching increased the stability of the walls, but the foundation of the walls having been carried down to the level of the floor, the benching was removed as being unnecessary.

Q.—Do you think, giving your opinion as a professional engineer, there are any structural defects in the design?

[Mr. Ewart states that he would rather not express an opinion upon the design of his superior, but being pressed for an answer says:—]

A.—Considering the design in the light of what has happened, I think that the walls might with advantage have been embanked so as to protect them from variations of temperature. I think also that the angles of the benching were a source of weakness. The curved footing with which they have been replaced appears, to my mind, to be more desirable. Speaking after the event, I consider that the thickening of the floor added to the stability of the Reservoir.

Q.—Do you consider the design generally a light one, as opposed to a heavy one?

A.—Yes. The columns supporting the roof appear light, considering that they have no bracing. I also consider the flooring light, but I cannot say it was insufficient. After the first failure, the additional foot of flooring was laid as a precautionary measure. Speaking after the event, I do not consider the section of the walls insufficient, but it was a light section as opposed to a heavy one. I consider that the design generally approached very nearly to the limit of safety, though not to the ultimate limit of stability.

Adjourned to Thursday, March 24, 1887, 10 A.M.

Thursday, March 24, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

H. EWART, Esq. (examination continued).

Q.—Were the foundation trenches filled up with concrete to their full width in every case?

A.—As a rule, yes. The trenches were excavated, and at the foundation level they were filled in to their full width; but above that, where cabook quarry pits had existed, and where there were slips, boarding was used.

Q.—Was the foundation cut more deeply into the solid on the north side than on the east, and, if so, how much?

A.—I am unable to say exactly without reference to the sections. We have sections in the office showing the cutting into the solid. There was no material difference.

Q.—What was the object of taking these sections showing where the solid cabook commenced?

A.—They were taken in order to decide on one uniform level for the bottoms of the foundations of each wall, so as to avoid having a variation of levels in one wall.

Q.—As a matter of fact, however, you had not a uniform level in any one wall. Is it not so?

A.—The different walls are at different levels; thus, the south wall is higher than the west, and the latter higher than the other two; but the foundations were stepped down from one level to another at the points of junction (at the corners). Between the corners they ran level.

Q.—Was the laying of the foundations carried out in wet or dry weather?

A.—As a rule, in dry weather.

Q.—Was the concrete kept watered while it was setting?

A.—Yes, each layer was kept damp till it was covered by the next.

Q.—Considering the nature of the excavations generally, do you consider that the vertical face of the cutting afforded more support to the wall on the north side or on the east?

A.—In the aggregate, rather more on the north.

Q.—What is your opinion as to the cause or causes of the first failure in October, 1885?

A.—Up to the time of the last (or third) failure I was of opinion that the cracks at the south east corner were due to cross strains at the angles of the benching, and that the water passing through the crack near the corner of the east wall softened the cabook below, and caused the rupture. I now think that some other explanation may possibly be found.

Q.—Did you observe the gaugings at the time of the first accident?

A.—I was in charge of the Reservoir, but I did not, as a rule, observe the gaugings myself.

Q.—You were aware that a certain increment of water was coming in steadily, and yet that the surface of the water did not rise steadily in due proportion on the 13th and 14th October, 1885?

A.—There was a difference between the gaugings worked out by the formula and the actual state of affairs, and having seen that, I did not pay so much attention to the discrepancy between the delivery of water and its rise in the Reservoir.

Q.—Did you cause any examination to be made of the outlet sluices, &c., so as to throw light on the cause of this?

A.—No, I made no examination. I was not aware that the discrepancy was so great as now appears. It was not until we saw the water oozing through to the outside wall that we were aware that leakage existed. I observe, from the diagram, that the leakage was only discovered about noon on the 16th, but the leakage had been going on since the middle of the 14th.

Q.—Was no examination made of the wall when the gaugings were observed to vary?

A.—The walls were examined daily, but not in consequence of the variation of the gaugings.

Q.—Was there a trial hole at that time at the foundation of the east wall?

A.—No.

Q.—The diagram shows that the water stood almost at the same level from 6 P.M. on the 13th, although water continued to come in. Do you not consider that water may have escaped through the floor before the cracks took place, and have saturated the cabook?

A.—I do not think that any water could have permeated the floor until the crack began. I think that a crack may have begun slightly earlier than the date shown.

Q.—What steps did you take to ascertain if water was passing under the foundations?

A.—The ground outside was examined, but no pits were dug to examine the foundations.

Q.—For 54 hours (about) this loss of water was taking place, and yet you took no steps to ascertain its cause?

A.—I was not aware of the loss of water.

Q.—Do the sections show the underpinning as it was laid, or do they show its average section?

A.—They show the average section, but on the east wall it differed slightly in places. The thickness of the underpinning in that wall was from 3 ft. to 4 ft. below the level of the foundations (5 ft. below the level of the floor).

Q.—Was the concrete for underpinning laid to its full depth at one operation?

A.—No, a space of 9 in. was left between the concrete of the underpinning and the bottom of the foundations to allow for shrinkage, and then, after the concrete was set, the remaining 9 in. were put in and rammed.

Q.—What was the interval between the laying of the first lot and the last 9 in.?

A.—As a rule, a clear day was left between the two operations, but sometimes the last layer was put in on the day after the first layer.

Q.—In conducting the underpinning, did you take any steps to guard against the expansion of the concrete?

A.—Yes, the cement was thoroughly mixed with the stone and sand, so that it might become thoroughly amalgamated with the other materials.

Q.—Are you aware that concrete will expand after it has been laid?

A.—Not with proper cement concrete.

Q.—Do you consider that the underpinning was of sufficient sectional area?

A.—The underpinning was chiefly for the purpose of securing a bond for the curved footings.

Q.—But could not the bond have been secured without disturbing the wall by underpinning it?

A.—Besides securing the bond the underpinning also filled up any places that may have been soft.

Q.—Are you aware that the fact of the expansion of cement concrete has been made use of by engineers in order to raise walls that have settled, by underpinning them with concrete?

A.—I never heard of it.

Q.—What was the specified breaking weight of your cement?

A.—I am not aware of any specified breaking weight. I presume there was some specified breaking weight in England.

Q.—Was the cement used straight from the barrels?

A.—Yes, in most cases. The custom was to open the barrels and at once mix this cement with the stone and water.

Q.—Was the cement mixed with the matrix dry, or with the water?

A.—It was mixed first dry with the stone and sand, and the water added afterwards.

Q.—Did you ever test the cement by its weight per bushel?

A.—Yes, in one or two instances. I think it weighed about 100 lb. per "striked bushel." It was not less. I should not conclude it was inferior from its weighing only 100 lb., without other tests.

Q.—Had you any reason to suppose this cement was of inferior quality?

A.—No.

Q.—Can you tell the tensile or crushing strain that the concrete would stand?

A.—No; the concrete was not put to any test.

Q.—Did your contractor, Mr. Mitchell, ever make any objections to the quality of the cement?

A.—I am not aware that he said the quality was bad. Some cement had been stored at the Factory, and was affected by damp, and had become lumpy, and the lumps were removed.

Q.—What were the proportions of the concrete?

A.—First of all stone and sand were mixed in even proportions, and then six parts of that mixture were added to one of cement for the hearting of the wall. The concrete blocks were four of sand to one of cement.

Q.—Have you ever worked concrete in similar proportions for a reservoir?

A.—No; in the other case, of which I have experience, the stone was broken in a crusher; it was millstone grit, and was sufficiently pulverised after crushing to supply the place of sand.

Q.—Were you quite satisfied with the work done by the contractor throughout?

A.—Quite.

Q.—To what cause or causes do you attribute the second failure of December, 1886?

A.—To the effect of contraction combined with the pressure of water. I think there was a sufficient difference of temperature before and after admitting water to place the half-inch cement rendering in tension, and this strain, combined with the pressure of the water, caused it to give way.

Q.—Did you take the temperature of the water or of the interior of the Reservoir?

A.—No; no temperatures were taken.

Q.—Which do you consider would be the lowest in the morning, the water or the cement?

A.—The water would be lower in temperature than either the cement or the air. The water was let into the Reservoir in the morning.

Q.—To what cause or causes do you attribute the third failure in February, 1887?

A.—In view of the fact that there was no settlement to be observed in the foundations, and also to there being no rupture through the wall, except at the corners, and especially, having regard to the fact that the wall remained standing after the rupture, although the pressure of the water was practically undiminished, I can only think that the rupture was caused by some inherent strain, such as contraction. I cannot form any other conclusion, because there is no evidence of settlement, and had the walls been weak enough to cause the rupture, they would either have overturned or collapsed.

Q.—Do you consider that they were in any way held back by the tie rods of the roof?

A.—No, practically they made no difference.

Q.—Have you any theory to account for the existence of the inherent strains in the wall which you spoke of?

A.—I can only suppose that the temperature being raised outside, while the inside remained steady, would cause a strain; and that when the water reached the level at which the rupture took place, this strain was acting on the weakest part of the wall. This is borne out by the fact that the rupture began at the top and ran down to the bottom.

Q.—When did you first observe the break in the east wall?

A.—As I went from the south side to the north side on my first arrival with Mr. Burnett. I saw the trial hole at the same time; no water whatever was issuing from the foundations. I saw the crack in the east wall the first time I passed along it with Mr. Burnett. I do not remember calling his attention to it at that minute. I do not know if he saw it or not. But certainly he saw it before we left that side of the Reservoir.

Q.—Do you attribute the crack in the centre of the east wall to the same cause as the other cracks?

A.—Yes.

Q.—Did you examine the side of the hill?

A.—Yes; if any water had been issuing from the foundations we should have seen it. There was no appearance of any saturation of the ground except what was due to the water issuing from the cracks.

Adjourned to Friday, March 25, 1887, 10 A.M.

Friday, March 25, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman*.
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Third Witness.—Mr. GEORGE WYLLIE, examined, states:—

I have been in the employ of the contractor for the Colombo Waterworks since nearly the commencement of the works at Maligakanda Reservoir, with the exception of an interval—I think from July to October, 1886—when I was at Labugama. On January 1, 1887, I joined the staff of the Resident Engineer, Mr. Burnett. I was a mason for nine or ten years, and had been a foreman mason before I came out to Ceylon. Under the contractor I was employed as foreman of works at Maligakanda. I acted in a similar capacity, as inspector, under Mr. Burnett. My duties under the contractor were principally to notify the contractor as to the material required, to see the concrete mixed and laid properly; and to supervise the masons. I had not had much experience of concrete before I came out here, but had made bases for columns and laid Portland cement floors. I consider the cement used at Maligakanda was of good quality.

Q.—What are the indications of good cement that lead you to think the cement used was of good quality?

A.—We had a machine for testing the tensile strength. That was the only test used, so far as I am aware. We weighed a sample barrel of each new consignment. The weight generally was about 400 lb. net.

Q.—What was the condition of the cement generally?

A.—There were several kinds of cement used,—one was called the Tunnel; this was rather gritty, we considered this the best. We had the Falcon brand also; this was very fine, like dust, and good. It was all in good condition when used, because when we found a barrel damp we rejected the lumps. We never ground up any lumps.

Q.—Who carried out the tests for tensile strength?

A.—Generally Mr. Ewart, in concert with Mr. Hill. I sometimes assisted. An old Tamil mason generally made the briquettes. After the first accident Mr. Campbell made the briquettes. He took up Mr. Hill's work when he left Ceylon.

Q.—Do you consider the cement you used here as good as that usually used by you in England?

A.—I cannot say anything as to the quality of the cement I used in England. We never tested it beyond seeing that it was not lumpy.

Q.—Is it not usual before mixing cement to turn it out of the barrel and spread upon the floor for some time in order to let it "cool."

A.—I believe it is usual, but it was not done at Maligakanda, with the exception of the Guelph patent barrel cement. The cement generally was turned out of the barrels and mixed at once.

Q.—Will you explain how the stone, sand, and cement were mixed in order to form the concrete?

A.—The stone was broken to pass through a 1½-in. ring. It was then washed. The stone was next mixed with an equal bulk of dry unwashed sea sand. The sand was coarse, and when we found any fine it was mixed with very coarse Kelani sand. The river sand was not washed by us. Then we took six measures of that mixture dry and mixed it with one measure of cement. It was afterwards turned over with shovels until it was thoroughly mixed. Then we spread it out and gradually added water out of a rose jet until the concrete became of proper consistency. It was then laid in layers of 9 in. to 12 in.

Q.—Did it set very rapidly?

A.—No, not very rapidly. It was generally a week before it had a "bone" in it, and three weeks before it would "ring" when struck with a pick.

Q.—Did you put one layer over another after the interval of one day only?

A.—Yes, we sometimes laid a second layer almost immediately, so that it was practically two layers in one We carried both on simultaneously, one layer in advance of the other.

Q.—Did you ever find any defects in the concrete after you had laid it?

A.—The only defect I remember was one caused by rain. This was cut out and renewed.

Q.—Were the blocking and the concrete filling carried up at the same time?

A.—No, the blocking was generally built up two or three days before the concrete was put behind it.

Q.—Do you know anything about cement concrete swelling after it is laid?

A.—No; nor do I think that it does increase in bulk, though some change may go on inside the block. I infer this from the crystalline deposit that appears on the outside.

Q.—It has been observed that the surface of the floor of the Reservoir has not set hard. Do you know the cause of this?

A.—I consider that the cement rendering has set perfectly hard. If a splinter of the broken floor be struck it "rings" like a piece of pottery.

Q.—Had you charge of the excavations for the Reservoir?

A.—Yes, from the time I came, only a little surface work had been done before my arrival

Q.—I suppose you have seen a good deal of foundations?

A.—Yes, of foundations for houses.

Q.—What do you think of this particular foundation at Maligakanda?

A.—I think it a very good foundation.

Q.—Was it hard?

A.—As a rule the excavation was done with a mamotie, but a pick was frequently used. Part of the foundation of the west end of the south wall was cut out in "sets" with the usual tools, the cabook there being hard.

Q.—Did any settlement show itself during the construction of the work?

A.—Not to my knowledge, nor do I think there was any settlement, because, in so far as the north and east walls were concerned, the walls and arching were all built after 4 in. of concrete had been laid over the floor, and when we examined the flooring before laying the further 8 in we found no indication of settlement at the junction of floor and walls.

Q.—Was any of the work rejected by the Government Engineers?

A.—No work was rejected. There were trifling objections taken to chipped blocks, but nothing of any importance. With the exception of a few weeks, when I was putting up the iron columns, a Government Engineer or Inspector was always present while work was going on.

Q.—Were you at Maligakanda at the time of the first failure in October, 1885?

A.—Yes, and I had charge of the repairs and additions that were afterwards made.

Q.—Do you consider that water percolated through the body of the 12 in. flooring as well as through the cracks?

A.—I think the water got through the cracks and the junction of the floor and walls, but I cannot say about the body of the flooring

Q.—Will you describe the manner in which the underpinning of the walls was carried out—the east wall, for instance?

A.—The work was laid in 10 ft. or 12 ft. lengths from 3 ft to 4 ft thick, in 6 to 1 concrete, and carried up to the bottom of the wall at one operation. The last 9 in were laid in 4 to 1 concrete after a day's interval. In digging out the foundations for the underpinning we found the cabook softened by the water that had percolated at the south-east corner, the depth of the softened part was 18 in. or 24 in There was slight softening for some distance along the base of the east wall, it ceased before we got to the north east corner.

Q.—You were at the Reservoir at the time of the failure on February 16, 1887. State in sequence the events as they occurred.

A.—Yes. I was there from the commencement of the filling I had a boy at the top and a man going round the Reservoir on February 16. My attention was first drawn to something unusual happening by the boy patrolling the top of the Reservoir. He called out that water was coming out of the north-east corner of the Reservoir. I was in the inlet well at the time taking gaugings. I went out along the parapet and saw water coming out of the north-east corner, near the top. This was at 3.55 P.M. I went down the ladder to look at the gauge in the interior of the Reservoir, and found that the gauge showed the level of the water to be 10 in from the top water level. I ran over and began to open the sluice valve. I opened it slowly and carefully in the usual way, taking from five to ten minutes over the operation I know that the discharge was not blocked, as the timekeeper Perera within five minutes ran up and told me that the waste pipe was discharging into the lake. I then wrote from the top of the Reservoir to the Resident Engineer to tell him what had occurred, and sent the note off at once. While I was writing this chit the man patrolling outside the Reservoir called out that something had happened at the south east corner. This would be about ten minutes after the first crack was reported. I went over to the south-east corner and found the water escaping through the wall in a similar manner to the north east corner. I remained on the top of the Reservoir until Mr. Burnett and Mr. Ewart arrived. I then accompanied the Engineers on their inspection. The water was turned off from the Reservoir by the patrol at the time that I opened the waste pipe, it was turned off before I wrote to Mr. Burnett. At first the water only came out of the top of the walls, but by the time the Engineers had arrived the cracks had opened down to the level of the ground. The south-east crack may have taken place some minutes before the patrol saw it, because he was engaged at the bye-pass valve. After coming from the top of the Reservoir I first went to the north-east corner. The highest point from which water was coming out of the crack was about on a level with the haunches of the panel arch. Mr. Burnett and Mr. Ewart were at this point just before I joined them. I believe that the level of the water inside the reservoir was higher than the highest point from which it was issuing from the crack. At 6 P.M. the gaugings showed that the Reservoir had lost 9 ft. 2 in. of water in two hours. At 8 P.M. it had lost 6 ft. more, and at midnight 25 ft. 8 in. altogether. I first saw the crack in the east wall when accompanying the Engineers from the south-east to the north-east corner. Although I looked into the trial pit about 11 in the morning of the day of the occurrence, I saw no sign of moisture. I did not look into the trial pit again that day. The next day I examined the pit several times, but found no trace of moisture, nor could I find any moisture coming from the hill side when I went down to examine it.

Q.—When asked as to whether you considered that water had percolated through the body of the flooring at the time of the first accident, you replied that you thought it had; but you afterwards withdrew this answer, stating that your reason for changing your opinion was, that as the Reservoir had stood firm while under nearly full pressure of water on the third occasion, the inference was that it must have been water tight. Do you not think that your original opinion may have been correct, and that the water-tightness at the time of the third failure is due to the extra thickness of flooring?

A.—Yes, I think water may have passed through the flooring when it was only 12 in. thick.

Q.—What makes you think that water may have passed through the flooring?

A.—I have made a trial of a piece of pure cement rendering, and after soaking it in water for some time and breaking it through, the fracture was wet throughout its extent.

Adjourned to Monday, March 28, 1887, 10 A.M.

Monday, March 28, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Fourth Witness.—F. D. MITCHELL, Esq., A.I.C.E., examined:—

Before giving his evidence, Mr. Mitchell desires it to be placed on record that he states that he has been relieved by the Government of all responsibility with regard to the failure of the Maligakanda Reservoir.

I have been the contractor for the Colombo Waterworks from the commencement, and have had considerable experience in carrying out large works both in Ceylon and in India, chiefly on railway works. I have frequently met with cabook in the cutting of the Péradeniya Nawalapitiya Railway and elsewhere.

Q. What was the general nature of the cabook on Maligakanda hill?

A. It varied very much.

Q. Will you describe its variations?

A. As far as I remember—but I think I am accurate—about the south-west corner and the north-west corner the cabook was hard, so hard that I engaged cabook cutters to quarry it in "sets" (blocks for building). Elsewhere it was generally of such a consistency that it was excavated with mamoties after being loosened with pickaxes.

Q. When the foundations were sunk to their fullest extent, what was the nature of the floor of the excavations of the east wall?

A. It was much softer than on the north-west and south-west corners, and whenever rain fell it became puddly, and it was necessary to remove about an inch of the surface with a mamotie before laying the concrete.

Q. Was the site of the Reservoir much excavated with cabook pits before the work was commenced?

A. Yes, chiefly on the western half of the Reservoir.

Q. What do you consider a safe load on the cabook on the foundations of the east side?

A. I have made no calculations about it, and do not feel myself to be in a position to give an opinion.

Q. Have you formed any opinion as to the suitability of the foundations as designed?

A.—Yes; I consider that the benching was an undoubted mistake. In the first place, the bottom of the wall was higher than the level of the bottom of the water, and the variations in the levels of the foundations of the walls necessitated stepping, which I consider an element of weakness in a structure of this character, unless founded on a rock.

Q. Should you consider from the design, that Mr. Bateman fully understood the nature of the soil upon which the Reservoir was to be built?

A. Certainly not.

Q.—Did you ever express any distrust of the foundations to Mr. Burnett?

A.—No; I never was consulted about anything in connection with the Waterworks. I expressed my distrust to Mr. Ewart, in conversation on one occasion, as to the thickness of the flooring and the benching.

Q.—Would not the fact of lowering the foundations of the east wall without widening them unduly increase the pressure on the subsoil?

A. Yes, certainly. I think the batter should have been carried down so as to give the foundations increased width in proportion to the additional depth.

Q.—You have already expressed the opinion that the benching generally was a mistake. Do you consider that the departure from the original design, namely, the removal of the benching on the north and east sides, and the carrying down the foundations on both those sides to the level of the floor of the Reservoir, gave additional stability to the structure?

A.—Yes. I consider that, looking to the nature of the cabook of which the benching would have been generally composed, it was practically necessary to do away with it.

Q.—Do you consider the foundation on the whole a good one?

A.—Considering what has happened, I do not.

Q.—Do you consider that the 12 in. of flooring laid on cabook was sufficient to withstand the pressure due to 40 ft. of water?

A.—I should say, looking to the variable nature of the cabook, it was not.

Q.—Do you think that the body of the flooring was generally permeable to water?

A.—I cannot say. The 1 to 4 sand concrete would absorb water, but I do not know what effect the ½-in. cement rendering would have in keeping it out.

Q.—Is it the case that after the first accident the cement rendering over the floor was found to be starred all over with very fine hair cracks?

A. I did not notice them.

Q.—Have you had much experience in concretes?

A. I have had considerable experience of concrete below ground, but I never before built a structure of it.

Q.—Do you not consider the composition of the concrete used for the floor, namely, 4 of sand to 1 of cement, an unusual one?

A.—I would rather not answer the question. The second 12-in. laid on the floor was composed differently: there was stone in that concrete.

Q.—Was the concrete put to any tests during the building of the Reservoir?

A.—I do not think any of the concrete was tested, the cement was tested.

Q.—Were you satisfied with the quality of the cement supplied to you?

A.—Yes, generally it was very good cement. On one or two occasions I objected to cement that was caked, and this was not used.

Q.—Do you not consider that the cement should have been turned out of the barrels and allowed to "cool" before using it, instead of being used straight out of the barrels?

A.—After the long voyage this was not necessary.

Q.—Do you consider that cement deteriorates on the voyage out to Ceylon?

A.—Yes, the tests here never come up to the English tests.

Q.—Did the engineers ever object to any of your work?

A.—No; never.

Q.—Do you consider that the bond in construction at the junction of the floor with the bottom of the wall was a satisfactory one?

A.—Yes; I consider that the bond was a good one.

Adjourned to Wednesday, March 30, 1887, 10 A.M.

Wednesday, March 30, 1887

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

F. D. MITCHELL, Esq. (examination continued).

Q.—To what cause or causes do you attribute the first failure of October, 1885?

A.—I cannot say which of the cracks at the base of the south wall took place first, but I have no doubt they were anterior to the crack at the junction of the east wall and floor. I think that those cracks were caused by the pressure of the superincumbent water. I think that the crack at the junction of the east wall and floor took place when the fracture in the south-east corner occurred, causing the east wall to turn on the north east corner as a pivot I consider that the fracture in the south-east corner was caused by water getting under the bottom of the wall The foundation, in my opinion, was weakened from water having been allowed to soak into it for two days I should explain that I had no control over the valves regulating the supply of water, and had nothing to do with the gaugings

Q.—Do you consider what you have just stated to be the sole cause, or are you of opinion that the failure may be partially due to the lightness in design of the walls of the Reservoir?

A. I have made no calculations and am not prepared to express any opinion as to the sufficiency or otherwise of the section of the wall, but looking to the fact that at the time of the second failure slight cracks developed in the south-west and north west corners of the Reservoir, I hold an opinion that the wall on the west side would eventually have gone had not the east wall parted. I may also state that I noticed on different occasions fine hair cracks running continuously for some distance up the west and other walls, following often the sinuosities of the joints and sometimes going right through the blocks. I do not consider that these hair lines can be explained by variations of temperature, in view of their general direction and continuity. These hair lines were on the outside of the Reservoir. I also noticed, some time before the flooring was completed, a hair line on the inner face of the west wall, which has developed since the last failure.

Q.—To what do you attribute the cracks?

A.—In my opinion they were due to the foundations.

Q.—Do you consider the angular form of the interior of the Reservoir objectionable?

A.—I think the rectangular junction of the floor and wall was objectionable.

Q—Do you consider the additions proposed by Mr. Burnett, after the first failure, namely, increased thickness of flooring, curved footings, underpinning, and buttresses, were suitable to the case he had to meet?

A.—I did not think they were adequate, the buttresses, which were proposed but were not carried out, would, in my opinion, have strengthened the east wall It was desirable to increase the flooring, but as it has not been under pressure for a sufficient time I cannot say if the additional thickness would prove sufficient The underpinning was necessary, but it did not go far enough in my opinion. The curved footings were an additional security

Q.—The section through the south wall shows a "neck" between the lower part of the wall proper and the underpinning only 4 ft. and 9 in. thick. Is not this dangerously weak?

A.—Certainly; and I pointed this out to Mr. Burnett. The underpinning of the south wall was not sufficient to be of much use in my opinion The same remark applies generally to the east wall.

Q—Do you know why the composition of the second thickness of flooring was different from the first 12 in?

A.—I do not know In my opinion, the second 12 in., into the composition of which stone entered, was stronger than the first 12 in., which was sand and cement only. The stone concrete is more solid and stronger.

Q.—Are you aware that neat cement rendering is permeable to water?

A.—I cannot say, I have never experimented with it.

Q—Why do you consider that the proposed buttresses to the east wall were necessary?

A—They would have acted as struts, and have tended to keep the wall in position.

Q.—Do you consider that sufficient time was generally allowed for one layer of concrete to set before another was put on to it?

A.—I do My opinion is, that it is, as a rule, desirable to lay cement while the lower layer is green, if possible. No cement was ever laid until we had ascertained that the previous layer had set properly.

Q.—To what cause or causes do you attribute the second failure of December, 1886?

A.—To causes similar to those which led to the first failure, only on the second occasion the water was run off at once and the cracks had not time to develop. I attribute the failure of the Reservoir on both first and second occasions to faults in the foundations.

Q.—Do you not consider the second failure was in a great measure due to the strain at the points of junction of the new and old work?

A.—I do not think that the second failure arose from the shrinkage of the new work.

Q.—To what cause or causes do you attribute the third failure of February, 1887?

A.—To the same main cause that had operated on the first and second occasions, namely, to the inherent weakness of the foundations. The foundations were, in my opinion, weak throughout, but they were especially weak on the east side. I am induced to think that on the occasion of the last failure the north east corner was the first to give way, because the fracture started from the same point as the old crack of October, 1885 I do not think that that crack was ever sufficiently opened out, and that although we could not detect its existence, it went much further into the wall than was supposed. After the wall had separated at the north east corner, I think that the next crack occurred in the south wall at the weakest point nearest to the east wall The alterations that were made at the south-east corner at the time of the first failure had apparently strengthened it considerably, for the new fracture did not anywhere touch the line of the first fracture.

Q.—Have you formed any opinion as to whether the crack in the floor took place prior to or after the cracks in the walls?

A.—I think the crack in the floor was nearly simultaneous with the cracks in the walls, and was caused by the wrench.

Q.—From your observations what do you consider that the movement of the wall was?

A.—Judging by the fact that the rods of the roof have, as I am informed, sagged, and that in one case the coupling had drawn over the threads of the screw, I should say that the wall had gone outwards and then moved back again. In my opinion it was to a great extent due to the tie rods that the wall did not go over further. I think the wall turned slightly on the outer edge of the base and then recovered itself as the pressure was relieved.

Q.—Do you think the thrust of the roof produced any pressure on the wall?

A.—No, I do not think so.

Q.—From your experience in works in India and in this country, are you of opinion that the failure of the Reservoir can be ascribed wholly or in part to variations of temperature affecting the exterior and interior of the Reservoir unequally?

A.—No, certainly not.

Q.—Is it usual to take account of variations in temperature in constructing works of concrete?

A.—So far as my knowledge goes I am not aware that it is usual to take variations of temperature into consideration.

Adjourned to Thursday, March 31, 1887, 10 A.M

Thursday, March 31, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Fifth Witness.—J. J. GRINLINTON, Esq., A.I.C.E, examined, states :—

I was at one time in the Government Survey Department, and as Principal Assistant to the Surveyor-General was nominated to an Official seat in the Municipal Council in January, 1866, and in October, 1867, as Chairman of the Public Works Committee, by resolution of the Committee, I was asked to report on a scheme for supplying Colombo with water, which report I sent in on June 30, 1871.

Q.—In connection with that report did you examine the Maligakanda hill as a site for a reservoir?

A.—No, I did not; but I did examine it at a subsequent date in connection with Mr Bateman's report to the Municipal Council, dated June 7, 1874. I find that on August 28, 1874, I wrote to the then Office Assistant to the Surveyor General (Mr Stoddart) for the services of Mr Fernando to assist me in making a contour of Maligakanda hill, but his services not being made available to me I made the contour myself. In making the contour I came to the conclusion that the space of ground on Maligakanda hill at a suitable altitude was quite insufficient to enable a reservoir such as was then contemplated by Mr. Bateman (to contain 13,000,000 gallons of water) to be constructed. In addition to the area being insufficient, the character of the ground on the eastern side of the hill led me to reject it altogether as a site for foundations. I considered it unreliable. I recorded my opinion generally in a letter to Sir William Gregory, dated September 14, 1874, and again in papers which accompanied a letter to the Colonial Secretary on April 19, 1877. In these communications I did not specifically refer to the unreliable character of the foundations, as I expected to be interrogated by the Government in connection with my letters. I find, on referring to my notes, that I recorded my opinion as follows:—"The felspar, which was quite visible on the eastern side of the hill, proved that the ground or cabook was in an advanced state of decay. In fact, the ground there was spongy, but not, so far as I could see, on the western side of the hill, nor yet where the coffee store and barbecue stand. When I was examining the hill on the eastern face I saw water oozing from the side of the hill." My letters and notes upon the Maligakanda hill as a site for a reservoir had reference not only to the spot outside the store walls on which the Reservoir has been erected, but to the whole of the hill at an altitude of about 70 ft., including the ground on which the store and barbecues stood. My belief is that the whole of the Maligakanda hill was available to the Waterworks Department as a site for a reservoir before the work was commenced. I should like to draw the attention of the Committee to an article in the *Ceylon Observer*, dated March 14, 1887, which Mr. MacDonald Cameron personally informed me correctly embodied his opinion as to the cabook formation on which the Reservoir was erected. Mr. MacDonald Cameron is M. P. for the Northern Burghs, a geologist of eminence, and was lecturer at the School of Mines in London. The article is as follows:—"The Maligakanda "Reservoir was re-visited by us (referring to the editors of the *Observer*) this morning in company with Mr "MacDonald Cameron, M.P. for the Northern Burghs, who is not only a civil engineer, but a geologist and "mineralogist of eminence. He was no stranger to the laterite formation on which the tank was so unhappily "erected, having years ago become familiar with it when reporting on gold-bearing rocks in Travancore. He knows, "as we all do, that this rock (our 'cabook') varies exceedingly in composition from hard ironstone to softest clay, "and that in proportion to its softness so must be its capacity of absorbing moisture. We believe, therefore, "we represent Mr. MacDonald Cameron's views correctly when we say that he agrees with those who hold that such "a superstructure ought not to have been erected on such a foundation, and that to this cause mainly is due the "series of accidents which have occurred. The difference between the soft laterite at the eastern end, where the "cracks go down into the foundation rock, and the hard, ferruginous formation towards the west was specially "noticed by Mr MacDonald Cameron."

Q.—Have you formed any opinion as to the cause or causes of the failure of the Reservoir at Maligakanda?

Q.—Yes, I have. I believe that it was due, in the first instance, to the precarious nature of the soil on the eastern side, and particularly at the south-east angle, where I noticed the unsound ground in 1874, my attention having been particularly attracted to it in consequence of a house having fallen down about two chains from that point, which had been standing on similar ground; and secondly, to the percolation of water through the floor, and possibly through the walls of the structure into the unsound soil on which the foundations stand. I believe that the fissure in the walls extends below the foundation into the body of the cabook. The fissure in the cabook is easily perceptible at the south-east end, but I could not be so certain of it at the north east angle.

Q.—Are you of opinion that the failure of the Reservoir can be ascribed wholly or in part to variations of temperature affecting the interior and exterior of the Reservoir unequally?

A.—No, I am not. The temperature of the water in the pipes which supply the Reservoir does not admit of such a theory.

Q.—Do you know if concrete walls expand and contract by heat and cold?

A.—Concrete walls of a light structure contract from exposure to great heat, but walls of the thickness of the Maligakanda tank would not, I consider, be affected by such slight variations of temperature as we have in Colombo. I have known instances of roofs of houses in Colombo where the concrete has contracted from the heat of the sun and where leakage has been stopped by a coating of asphalte.

Sixth Witness.—R. D. ORMSBY, Esq., M.I.C.E., examined, states :—

I am Office Assistant to the Director of Public Works, and have had twenty-one years' experience of works of construction in various parts of the Island. I have had experience of cabook in all its varieties, and I know the formation of Maligakanda hill. I frequently visited the Reservoir during the period of its construction and subsequent to the successive failures.

Q.—To what cause or causes do you attribute the first failure of the Reservoir of October, 1885?

A.—My belief is that the water went through the floor either from the composition of the concrete or from the floor being too thin, or both causes; that the water got under the foundation of the east wall; and that the wall shifted to a very small extent (say ½ in.) on its foundation. I consider that it went at the south-east corner, because the junction between the south and east walls was less perfect than between the north and east walls. I know as a fact that the cabook in this particular case has become "soapy" to the feel.

Q.—Are you of opinion that the crack at the south-east corner was due to the stepping shown in the section of the south wall?

A.—I do not think the crack was specially attributable to the stepping referred to, but chiefly to the imperfect connection between the floor and the walls, especially so in the case of the south wall.

Q.—Do you consider that if the Reservoir had been built on solid rock the 12 in. thickness of the floor would have been sufficient?

A.—In that case the flooring would have sufficed in my opinion.

Q.—Judging by the design, do you consider that Mr. Bateman could have been fully aware of the nature of the cabook on which it was proposed to build the Reservoir?

A.—I do not think that he could. No one unacquainted with cabook could appreciate its variable and yielding nature, or the differences in its character even over small areas.

Q.—Do you consider the cabook at Maligakanda of inferior quality?

A.—It is very inferior under the east wall.

Q.—To what cause or causes do you attribute the second failure of December, 1886?

A.—The cracks on that occasion were, I think, due to separation of the new work from the old when the concrete was setting, brought into operation by the filling of the Reservoir. I think on that occasion more water must have found its way into the foundations and increased the damage done on the first occasion.

Q.—Do you consider the composition of the concrete of the first flooring (4 of sand to 1 of cement) a suitable one for the purpose?

A.—I do not. I consider that to make a sand concrete impermeable to water at least 33 per cent. of cement is required, that is, 1 of cement to 2 of sand.

Q.—What is the criterion of a good cement in this country?

A.—In testing for cement I should look for the following conditions to be fulfilled:—The briquette of 1½ in section should test up to 800 lb. on the briquette after seven days, and should increase materially after fourteen and twenty-eight days. I attach more importance to a test taken after twenty-eight days' immersion than to one taken after seven days only. The colour should be bluish gray, and the cement free from lumps. I would in an important work reject the whole of the contents of a barrel if any portions were lumpy.

Q.—Do you consider it good in design to fix the floor of any reservoir 5 ft. below the foundation of the walls, both being founded upon cabook?

A.—No, certainly not.

Q.—To what cause or causes do you ascribe the third failure of February, 1887?

A.—I think it was due to the slipping of the east wall on its foundations. I have examined it very carefully. The whole movement need not have exceeded ½ in.

Q.—Looking at the sections, and with your own special knowledge of the ground on the east side, do you consider that the vertical face of the excavation can have given any material support to the east wall?

A.—It was worth something, but very little; practically the value may be omitted when calculating the stability of the wall.

Adjourned to Friday, April 1, 1887, 10 A.M.

Friday, April 1, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Seventh Witness.—F. VINE, Esq., M.S.E., examined, states:—

I have been twenty one years in the Public Works Department of Ceylon, and have had great experience of works of construction in various parts of the Island. I have been twelve years in the Western Province, where there is much cabook formation. Previous to coming to Ceylon I had experience of works in the Royal Engineer Department in England in connection with the national defences, and was employed at Sandown and on the Portsmouth land defences. In all, my experience extends over thirty-five years.

Q.—Have you examined the cabook on Maligakanda hill?

A.—Yes, I examined it thoroughly this morning on all sides of the hill.

Q.—What are the general characteristics of the cabook?

A.—I find that the Reservoir has been built on the extreme north end of the hill. The outer crust of the cabook is fairly solid, resting on a stratum of soft cabook of a yellowish colour; still lower down there is whitish-coloured semi-fluid cabook (kirimeti), and below that there is gneiss rock at a depth of about thirty feet from the surface of the ground. My observations were taken from a well situated about 300 ft. from the site of the Reservoir on the western side. The crest of the hill on which the Reservoir is built is about 50 ft. above the surface of the ground where the well is situated.

Q.—On what particular cabook formation do the foundations rest?

A.—On the soft cabook generally, but in one or two places the excavations are in the solid outer crust of hard cabook. I think it was a great mistake to cut through this outer crust of hard cabook; the foundations would have been safer if they had rested on it.

Q.—What is your opinion of soft cabook as a subsoil for foundations?

A.—In itself, and speaking generally, it is a good enough soil to build upon, so long as there is a sufficient depth of it; but I don't consider it a good foundation for a reservoir.

Q.—Would you consider sound cabook in any circumstances a good foundation for a reservoir?

A.—Yes, if there was a stratum of 25 ft. of hard cabook to work upon.

Q.—Is it not the case that water percolates through hard cabook freely?

A.—There are some kinds of cabook through which water does not easily penetrate, but through ordinary cabook water percolates freely.

Q.—Would water percolate through the cabook on the Maligakanda hill?

A.—Yes, through at least 75 per cent. of it.

Q.—Would you consider the cabook on the Maligakanda hill compact?

A.—No.

Q.—What experience have you had of large works on cabook foundations?

A.—The offices of the Surveyor-General are built on cabook; the Welikada Jail; the foundations of the clock tower were cut through cabook to the solid rock underneath.

Q.—What do you consider would be a safe load per square foot on the soft cabook that you have described?

A.—I cannot say; the stratum is so variable.

Q.—Have you had much experience in concretes?

A.—Yes, chiefly below ground.

Q.—Given that the flooring of the Reservoir consists of 11½ in. of 4 to 1 sand and cement, with ½ in. rendering of neat cement, and bearing in mind that there may be a maximum pressure of 40 ft. of water, do you consider such a flooring resting on cabook would offer sufficient resistance?

A.—I think the water would find its way through.

Q.—Would you consider 4 of sand to 1 of cement a good concrete?

A.—No, not for this work. I should certainly use not more than 2 of sand to 1 of cement, and should have preferred 1½ of sand to 1 of cement. Even then I consider the floor insufficiently thick. I should have had laid a floor in stone concrete 3 ft. to 4 ft. in thickness.

Q.—Would you consider a stone concrete composed of equal parts of stone and sand and six parts of this mixture to one of cement a good concrete?

A.—No, I should say there was too much sand in it.

Q.—Have you formed any opinion as to the causes of the failures of the Maligakanda Reservoir?

A.—Yes, I attribute them all to bad foundations. I believe there has been a general subsidence of the whole structure, and a slipping of the stratum on which the eastern wall is founded.

Q.—From your experience of works in this country, do you think that the failures of the Reservoir can be ascribed wholly or in part to variations of temperature affecting the interior and exterior of the Reservoir unequally?

A.—I think the variations referred to may have something to do with the failures, but I cannot say to what extent

Q.—Are you aware that concrete expands in setting?

A.—Yes; in turning concrete arches we always find that the arch in setting lifts itself off the centering.

Eighth Witness.—JOHN PERERA, examined, states:—

I am timekeeper at the Maligakanda Reservoir. I remember February 16 of this year. I was off duty from 3.30 to 5 P.M. on that day, and was at my house in Dean's road. About 4.20 P.M. on that day I saw the water from the wastepipe of the Reservoir discharging freely into the lake. Shortly afterwards I heard a man say that the Reservoir was cracked, and I immediately ran from my house as fast as I could up to the Reservoir. I there saw Mr Wylie on the top of the Reservoir, and I went up and spoke to him. I then accompanied him to look at the cracks. I cannot say which crack happened first.

Ninth Witness.—SINHO APPU, examined, states:—

I am a fitter by trade, and had charge of the valves at the Maligakanda Reservoir. About 4 P.M. on February 16 I was walking round the Reservoir in obedience to orders, when Perriyan, who was on the top of the Reservoir, raised a cry that there was a crack in the Reservoir on the side away from the store (north side). I was on that side at the time, about twenty-five yards off from the crack. The second crack on the store side was first seen by me. I am quite sure the crack on the north side happened first.

Tenth Witness.—PERRIYAN, examined, states:—

I was employed to watch the Maligakanda Reservoir and as messenger. I remember February 16, the day of the breaking of the Reservoir. I was on the top at the time on the side away from the coffee store (north side). I heard a sudden reverberating noise at the north east corner (the witness imitates the noise), and from the place where I was standing I saw the water coming out from the crack. Sometime after Sinho Appu called out that there was a crack on the coffee store side (the south). I am quite sure the crack on the north side happened first.

Adjourned to Tuesday, April 5, 1887, 10 A.M. Adjourned again to Friday, April 15, 1887, 10 A.M.

Friday, April 15, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

Eleventh Witness.—E. C. DAVIES, Esq., Engineer of the Government Factory, examined, states:—

I have recently taken borings on the site of the Maligakanda Reservoir on the north and east sides, at distances respectively of 52 ft. and 35 ft. from the walls of the Reservoir. The number of borings taken was two. On the north side I found first a stratum of 12 ft. of hard cabook; underlying it came 18 ft. of soft cabook (kirimeti what natives call bad cabook), below that I found 7 ft. of brownish clay; at 37 ft. I got water, and the colour of the clay changed to yellow, miry clay, at 42 ft. I stopped borings as the rods had entered a liquid mud, and were sinking by their own weight. The following morning I sounded this boring with a plumb bob and line, and found liquid mud at the bottom and 9 ft. of water, the top level of the water being 36 ft. from the surface of the ground. On the east side the borings yielded similar results to those on the north side, except that the hard upper crust of cabook did not exist on the east side, the boring tools at once entering soft cabook, which appeared to me to be made ground. At 37 ft., before I struck water, I got 1 ft. of very stiff red clay, which took six hours to go through; after that we got water and a soft yellowish clay. After 42 ft. I found a very soft yellow clay mixed with kirimeti, having no fibre. The rods were rather hard to draw. I produce to the Committee the material found at the several depths

Adjourned to Monday, April 18, 1887, 10 A.M.

Monday, April 18, 1887.

PRESENT:

Hon. Lt.-Col. CLARKE, Surveyor-General, *Chairman.*
Hon. H. BOIS, M.L.C.
Lt.-Col. CLIVE, R.E.
R. K. MACBRIDE, Esq., Director of Public Works.

A. W. BURNETT, Esq., re-examined.

With reference to the following question, which Mr. Burnett, at his examination on March 17, said on the suggestion of the Committee that he would rather not answer as concerning the Consulting Engineer (p. 8), he now expresses his desire to answer it, to avoid misunderstanding:—

Q.—Do you consider it good in design or construction to have made the bottom of the Reservoir 5 ft. below the foundation of the walls, when those walls were on cabook, and only a skin (1 ft.) of cement plaster (or concrete, as the case may be) to keep the water at a pressure of 40 ft. head from getting under the bottom?

A.—The first part of the question was already answered on the previous day, as to the difference in level between the bottom of the Reservoir and the walls, and there is, in my opinion, no special objection against such a system of construction on cabook. With regard to the skin of cement plaster, the original concrete flooring was faced with a ½ in. neat cement lining, and this, under ordinary circumstances, would, I consider, have been sufficient.

Q.—Are you satisfied with the contractor's work throughout ?

A.—Yes.

Q.—Did you yourself make Mr. Bateman thoroughly aware of the nature of cabook, or was the information conveyed to him by or through some one else ?

A.—When I went home in 1874, I gave him personally full information as to the character of cabook, and again, after the first accident, in 1885, I wrote fully to him upon the subject. This letter I can produce, if necessary. So far as I can remember, I described the cabook to be very similar to chalk · permeable to water, in some places of a clayey nature, and in others very hard and almost cindery. I also likened the general character of the ground where the foundations would stand to the softer and finer shales of the coal measures. I also told him that with water the cabook would work up into puddle, like ordinary clay. This is the gist of what I told him in 1874

Q.—It has been stated in evidence by another witness, that when the foundations were sunk to their fullest extent, the floor of the excavation of the east wall was much softer than the floor at the north west and south west corners. Do you agree with this statement ?

A.—No. If anything, the floor of the excavation at the north-west and south-west corners was softer than on the east side. Practically I do not think there was any material difference.

Q.—It has been stated in evidence that during the progress of the work fine hair cracks were observed running continuously for some distance up the west and other walls, following often the sinuosities of the joints and sometimes going right through the blocks. Are you aware of the circumstance, and, if so, to what cause do you attribute it ?

A.—I have been quite aware of the circumstance during the whole time of the work. The cracks on the outside are ordinary sun cracks that occur on most masonry walls. They were chiefly at the angles of the recesses and projections of the face of the wall, and took place within a few weeks of the courses being laid. One was pointed out to me at the north west corner on the west face. I cut it with a chisel and hammer, and it did not extend to a greater depth than one-sixteenth of an inch from the face. This face crack re appeared in the same place some two or three months afterwards With regard to the inside, there were no cracks of that nature, except at one place on the west wall. This crack has remained in the same condition for over three years without developing it is a surface crack, and does not extend any distance into the blocks. I think this crack may have been caused by temporary exposure of that particular part to the sun when we were working at the over flow pipe, close to which it is situated.

Q.— What led you to adopt the proportions of 4 sand to 1 of cement in the concrete for the flooring, and 3 of stone, 3 of sand, and 1 of cement for the hearting of the walls ?

A.— The proportions for the flooring were taken from Mr Bateman's specification The specified proportion for the walls was 6 of stone and sand to 1 of cement. I experimented with different proportions of stone and sand, and found that a mixture made of equal parts of sand and stone was the proportion that gave the best results in the work With less sand the stone was not fully bedded in the matrix.

Q —Do you consider a concrete composed of 4 parts sand to 1 of cement suitable for the flooring of the Reservoir, and, if so, why did you alter the proportion in the second floor ?

A — Yes ; subsequently, as in my opinion 6 of stone and sand to 1 of cement was equally strong, and Rs a yard cheaper, I saw no reason for going to the additional expense.

Mr. Burnett being asked if he has anything further to bring to the notice of the Committee, calls attention to the table of gaugings put in, which he says prove that no filtration or loss whatever through the floor took place on the occasion of the first failure in October, 1885, previous to the irregularity shown by the gaugings on the morning of the 14th. On the occasion of the last failure in February, 1887, he points out that there is the same evidence up to the moment of the fracture. Mr Burnett further observes that the plans and specifications of the Reservoir were before the public for over a year, so that there was ample time for contractors who intended to tender for the construction of the works, or any one interested, to point out any objections that, in their opinion, existed as to design or site.

Adjourned to Wednesday, April 27, 1887, 10 A.M. Adjourned again to Thursday, April 28, 1887, 10 A.M.

APPENDIX.

Composition of the Concrete used in the Works at Maligakanda

The following composition was used for the hearting of the walls and the second thickness of flooring after the first failure :—

16 c. ft. measure of broken stone taken separately
16 c. ft. measure of sand taken separately.
When mixed together measured 26⅔ c. ft.—say, one cubic yard
Proportions thus being —stone 10⅔ c. ft., sand 16 c. ft., or about 3 sand to 2 stone
Proportion of cement —⅙ = 4½ c. ft. per cubic yard total proportions being thus :—

Stone	...	2·45
Sand	..	3·55
		6·0
Cement		1·0
		7·0 or, say, stone 2½, sand 3½, cement 1.

The composition of the original flooring and of the facing blocks was four parts sand to one of cement.

A. W. Burnett.

Table Showing Results of Cement Testing

Date of making Briquette. 1883.	Date of Testing 1883.	Age in Days	Total Breaking Strain. lbs	Name of Store or Ship.
Jan 6	Jan 13	7	680	Factory 1
6	13	7	800	do. 1
8	Feb 12	35	805	do 1
8	12	35	770	do. 1
12	12	31	728	do. 2
12	12	31	—	3
Mar 21	June 1	72	716	Maligakanda
21	1	72	680	do
27	1	66	1 100	do
27	1	66	1,230	do 4
April 10	1	52	975	do
10	1	52	1 155	do
23	1	39	590	do
23	1	39	880	do.
27	1	35	985	do
16	15	60	890	do
21	15	55	780	do
25	15	51	790	do
May 2	15	44	830	do
4	15	42	910	do
11	15	35	900	do
15	15	31	800	do
2	Aug 9	99	963	do.
4	9	97	1,015	do.
11	9	90	810	do
15	9	86	1 000	do
17	9	84	1,030	do.
17	9	84	910	do
24	9	77	910	do.
24	9	77	830	do
31	14	75	1,090	do
June 4	14	71	803	No record 6
4	14	71	755	do
12	14	63	1,008	do
12	14	63	972	do
July 17	14	28	770	do
21	27	37	1 130	do.
30	27	28	900	do
Aug. 3	27	24	1,228	do
8	27	19	1,150	Factory
10	27	17	970	do.
11	27	13	1,070	do.
11	27	13	1,170	do
14	27	13	1,195	do
16	27	11	800	do.
16	27	11	660	do.

Date of making Briquette. 1883.	Date of Testing 1883.	Age in Days	Total Breaking Strain. lbs.	Name of Store or Ship
Aug. 1	Sept. 21	48	1,060	Factory 6
7	21	45	1,165	do.
21	21	31	850	do
23	21	29	1,005	do.
25	21	27	1,220	do
25	21	27	1,105	do.
25	21	27	680	do.
30	21	22	960	do.
Sept. 1	21	20	840	do.
4	21	17	900	do.
6	21	15	700	do.
Aug. 21	Oct. 3	43	915	Union 6
21	3	43	850	do
23	3	41	785	do
23	3	41	872	do.
Sept. 8	3	25	682	Factory
8	3	25	617	do.
11	3	22	960	Union
11	3	22	819	do.
Aug 7	10	61	1,062	Factory
7	10	61	1,003	do.
Sept. 8	10	32	667	do.
11	10	29	824	do.
15	10	25	814	do
15	10	25	639	do.
22	10	18	980	do
22	10	18	1 087	Union.
20	19	29	1,100	do.
20	19	29	835	do.
20	19	29	1,015	Factory
Oct. 6	19	13	975	Union
6	19	13	740	Factory
6	19	13	1 005	Union
Sept. 15	26	41	840	Factory
27	26	29	801	do.
27	26	29	1 225	Union
27	26	29	1,090	do.
29	26	29	1,030	do.
29	26	27	801	do.
29	26	27	692	Factory
Oct 4	26	22	758	Union
4	26	22	841	do.
4	26	22	913	do.
2	26	24	975	do.
2	26	24	885	Factory
13	26	13	865	Breakwater

1 Inferior condition caked, but not very hard.
2 Caked ; rather hard ; did not fall till struck with a hammer.
3 The cement could, however, be powdered between finger and thumb.
4 This briquette stood 1,230 lb. three times; on fourth application broke as opposite.
5 Briquette did not break , strain was not again applied.
6 Tunnel Co., manufacturers.

Date of making Briquette.	Date of Testing.	Age in Days.	Total Breaking Strain.	Name of Store or Ship.
1883.	1883.		lbs.	
Oct. 13	Oct. 26	13	793	Breakwater
13	26	13	685	do.
Aug. 10	Nov. 2	84	1,043	Union 1
10	2	84	1,125	Breakwater
Sept. 18	2	45	1,035	Factory
Oct. 23	2	10	735	Breakwater
20	2	13	955	do.
4	2	29	1,165	Factory
18	2	15	832	do.
18	2	15	1 072	Breakwater
Sept. 18	9	52	960	Factory
18	9	52	1,064	do.
Oct. 11	9	29	860	Breakwater
16	9	24	792	Factory
16	9	24	740	Breakwater
25	9	15	875	Factory
25	9	15	889	Breakwater
25	9	15	925	do.
27	9	13	852	Factory
27	9	13	900	Breakwater
27	9	13	839	do.
Sept. 13	16	64	1,082	Factory 2
13	16	64	859	do. 2
13	16	64	710	do. 2
25	16	52	1,225	Union 3
Oct. 11	16	36	1,170	Factory 2
18	16	29	1,082	Breakwater
16	16	31	713	do
30	16	17	830	do.
Nov. 6	23	17	513	ss. Dacca 4
6	23	17	485	do. 4
10	24	14	626	do. 5
Oct. 23	24	32	996	Breakwater
23	24	32	847	Factory 2
Nov. 11	24	13	673	ss. Dacca 4
Sept. 23	24	62	904	Factory 2
Oct. 20	Dec. 1	12	1,021	do.
30	1	32	800	do.
Nov. 8	1	23	618	do
20	1	11	627	do
3	1	28	983	Breakwater
22	1	9	680	Factory
Oct. 8	7	60	1,074	Union
Nov. 8	7	29	922	ss. Dacca 4
11	7	26	788	Factory 2
21	7	13	937	Simmons
26	7	11	765	Creasy 6
26	7	11	815	do.
27	7	10	560	Simmons
27	7	10	581	do.
6	15	39	1,012	Factory 2
13	15	32	856	ss. Dacca 4
22	15	23	732	do 7
24	15	21	972	Creasy 6
29	15	16	621	Simmons
Dec. 4	15	11	706	Creasy
1	15	14	630	Simmons
6	15	9	817	— 4
Oct. 20	22	63	1,170	Breakwater
Nov. 10	22	42	931	ss. Dacca 4
8	22	44	886	do. 4
20	22	32	909	do. 4
20	22	32	772	do. 4
Dec. 4	22	18	893	Creasy 6
6	22	16	608	Factory 2
1	22	21	861	Simmons 8
11	22	11	792	ss. Paramatta 4
Oct. 30	28	59	1,159	Breakwater 9
Nov. 24	28	31	1,038	Simmons 9
29	28	29	861	do. 9
29	28	29	843	do. 9
Dec. 8	28	20	981	— 4
8	28	20	960	Factory 2
13	28	15	692	do. 2
13	28	15	601	ss. Paramatta 4
15	28	13	610	do. 4
	1884.			
Nov. 22	Jan. 5	44	773	ss. Dacca 4
Dec. 11	5	25	731	Factory 2
1	5	35	992	Simmons
6	5	30	1,174	— 4
8	5	28	1,085	— 4
20	5	16	789	Factory 2
22	5	14	829	do 2
Nov. 11	11	61	1,000	do. 2
Dec. 12	11	30	784	ss. Paramatta 4
29	11	22	748	do. 4

Date of making Briquette.	Date of Testing.	Age in Days.	Total Breaking Strain.	Name of Store or Ship.
1883.	1884.		lbs.	
Dec. 20	Jan. 11	20	670	ss. Paramatta 4
22	11	13	705	do. 4
1884.				
Jan. 3	11	8	648	do. 4
1883.				
Dec. 12	18	37	820	Creasy 6
15	18	34	850	Factory 2
22	18	27	600	ss. Paramatta 4
29	18	20	1,016	do. 4
1881.				
Jan 1	18	17	766	do. 4
5	18	13	547	Factory 2
8	18	10	700	do 2
1883.				
Nov. 26	25	60	1,052	Creasy 6
Dec. 15	25	41	861	ss. Paramatta 4
29	25	27	719	Factory 2
1881.				
Jan. 12	25	13	862	ss. Paramatta 4
12	25	13	755	Factory 2
5	25	20	739	ss. Paramatta 4
15	25	10	711	do. 4
3	Feb. 2	30	560	Factory 2
5	2	28	919	ss. Paramatta 4
15	2	18	600	Factory 2
17	2	16	760	ss. Paramatta 4
19	2	14	790	do 4
22	2	11	925	Factory 2
1883.				
Dec. 11	8	59	1,067	ss. Paramatta 4
1881				
Jan. 8	8	31	705	do 4
17	8	22	815	Factory 2
22	8	17	900	ss. Paramatta 4
24	8	15	713	do. 4
26	8	13	817	Factory 2
29	8	10	720	ss. Paramatta 4
17	16	30	983	do
19	16	28	882	do
22	16	28	770	do.
24	16	23	682	do.
Feb. 2	16	11	910	do. } 4
4	16	12	975	do.
Jan. 12	23	12	1,100	do
26	23	28	971	do.
Feb. 4	23	19	901	Factory 2
9	23	14	880	ss. Paramatta 4
12	23	11	876	do. } 4
7	23	16	710	do.
Jan. 24	29	36	1 108	Factory 2
Feb. 2	29	27	810	ss. Paramatta 4
4	29	25	1,020	do.
9	29	20	1 013	do.
14	29	15	733	do.
16	29	13	900	do. } 4
Jan. 8	March 8	60	900	do.
26	8	12	1,037	do.
Feb 12	8	25	920	do
Jan. 19	8	49	1,120	Factory 2
Feb. 23	8	14	800	ss. Paramatta 4
28	8	9	735	do
Jan. 15	15	60	910	do.
Feb. 16	15	28	1,100	do.
7	15	37	827	do
19	15	25	795	do.
28	15	16	1,112	do. } 4
March 1	15	14	1,015	do.
4	15	11	930	do.
Feb. 14	21	36	—	do 10
23	21	27	75	do.
26	21	24	865	do
March 6	21	15	604	ss. India 4
8	21	13	950	do. } 4
11	21	10	702	do.
Feb 21	21	29	1,220	ss Paramatta 4
Jan. 29	28	59	1,062	ss. Paramatta
Feb. 26	28	31	1,076	do. 4
Mar. 8	28	20	1,005	ss. India
11	28	17	1,078	do.
13	28	15	850	do.
15	18	13	694	do.
4	April 11	38	1,080	ss. Paramatta
13	11	29	875	ss India
20	11	22	853	ss. Rewa
25	11	17	710	ss. Balowa
29	11	13	713	do.
Feb. 21	18	57	1,220	ss. Paramatta

1 Union and Factory Stores; Tunnel Co., manufacturers.
2 Tunnel Co., manufacturers.
3 Not broken.
4 Robins & Co., manufacturers.
5 Tested by Mr. Mitchell.
6 Sample only.
7 Small pieces of paper inside.
8 Loan by Breakwater, maker not noted.
9 Not noted.
10 Broke in screwing up.

Date of making Briquette. 1884.	Date of Testing. 1884.	Age in Days.	Total Breaking Strains. lbs.	Name of Store or Ship.
Mar. 18	April 18	31	802	ss. India
22	18	27	830	ss. Rewa
29	18	20	790	ss. Balowa
April 4	18	14	915	do.
10	18	8	673	do.
Feb 19	25	66	1,220	ss. Paramatta
Mar. 15	25	41	1,090	ss. India
20	25	36	942	ss. Rewa
25	25	31	949	ss. Balowa
April 1	25	24	962	do.
15	25	10	780	ss. Goorkha
17	25	—	—	do. 1
17	25	—	—	do.
Mar. 6	May 2	57	1,195	
23	2	10	1,023	
April 1	2	31	920	
12	2	20	883	
19	2	13	572	
22	2	10	520	
Mar. 18	9	52	1,073	
April 5	9	34	1,084	
12	9	27	962	
19	9	20	730	
24	9	15	853	
29	9	10	872	
15	23	38	1,047	
24	23	29	795	
29	23	24	861	
May 1	23	22	1,017	
10	23	13	705	
April 26	30	34	870	
May 6	30	24	1,137	
13	30	17	832	
15	30	15	710	2
April 4	June 6	63	817	
26	6	41	950	
May 6	6	31	1,062	
15	6	22	470	
17	6	20	715	
23	6	14	912	
1	13	43	1,082	
13	13	31	845	
23	13	21	912	
29	13	15	892	
29	13	15	917	
April 22	20	28	720	
May 17	20	31	870	
27	20	24	980	
27	20	24	865	
31	20	20	876	
31	27	27	1,055	
June 3	27	24	1,090	
3	27	24	970	
5	27	22	635	
5	27	22	855	

Date of making Briquette. 1885.	Date of Testing. 1885.	Age in Days.	Total Breaking Strain. Good Cement. lbs.	Total Breaking Strain. Hard Cement. lbs.
April 6	July 7	92	1,013	915
May 9	7	59	822	1,005
June 15	10	25	600	560
20	10	20	880	700
27	10	13	623	515
18	17	29	780	795
25	25	30	953	976
July 4	25	21	730	670
9	25	16	630	655
9	Aug. 8	30	875	655
16	8	23	650	Broke at once 4
25	8	14	640	do.
11	22	39	720	70
20	Sept. 11	53	600	—

Date of making Briquette 1886.	Date of Testing. 1886.	Age in Days.	Total Breaking Strains. lbs.	Name of Store or Ship.
Aug. 6	Aug. 22	16	590	— 5
8	22	14	broke at once	—
13	22	9	do	— 6
15	22	7	430	— 7
13	28	15	385	—
18	28	10	565	—
20	28	8	490	—
22	Sept. 3	12	735	—
27	3	7	540	—
15	11	27	622	—
20	11	22	725	— 8
18	11	24	620	— 8
22	Dec. 2	102	1,225	—
26	2	98	1,107	—
27	2	97	1,156	—
21	Sept. 24	31	680	— 9
31	24	24	635	— 10
Sept. 7	24	17	628	— 10
11	24	13	660	— 10
Aug. 21	24	31	650	— 11
31	24	21	600	— 12
Sept. 7	24	17	660	— 13
11	24	13	670	— 13
1885. July 11	1886. May 15	308	770	— 14
27	15	292	1,220	— 15
Aug 29	15	259	1,220	— 16
1886. May 5	May 15	10	860	— 17
15	June 4	20	730	— 18
21	4	14	780	— 18
28	4	7	785	— 18
9	4	26	1,220	— 18
9	4	26	920	— 19
June 1	12	8	675	— 20
4	12	8	680	— 20
11	19	8	710	— 20
11	19	8	672	— 18
5	19	14	895	— 18
May 28	19	22	900	— 18
21	19	29	1,020	— 18
June 7	25	18	1,015	— 20
11	25	14	848	— 18
15	25	10	725	— 20
18	25	7	791	— 18
12	July 2	20	722	— 21
18	2	14	850	— 22
11	9	25	777	— 23
15	9	21	920	— 24
July 3	16	13	45	— 25
3	16	13	710	— 25
June 21	16	25	1,022	— 27
21	16	25	1,055	— 21
July 10	16	6	557	— 24
10	16	6	597	— 27
9	16	7	719	— 17
9	16	7	566	— 17
8	23	15	690	— 26
8	23	15	840	— 24
17	23	6	785	— 26
June 21	23	29	946	— 22
24	23	29	976	— 23
July 7	23	16	740	— 23
7	23	16	740	— 23
16	23	7	610	— 22
16	23	7	706	— 23
14	30	16	910	— 23
14	30	16	895	— 23
23	30	7	650	— 23
23	30	7	694	— 23
12	30	18	830	— 23
12	30	18	860	— 23
5	30	25	775	— 23
5	30	25	835	— 23
15	30	15	768	— 24
15	30	15	720	— 24

1 Broke in screwing.
2 Robins & Co manufacturers.
3 All these tests were made with cement from barrels affected by damp The *bad* specimens were made with cement so hard that it had to be broken up with hammers. Robins & Co., manufacturers.
4 These were taken from the last fifty-three barrels in store, west end,—all Robins & Co.
5 Burge and Barrow. Water had only penetrated about 1-8th to 3-16th inch.
6 Briquette full of blow-holes at place of fracture.
7 This briquette was better made than the others.
8 Chip of wood was embedded in briquette at place of fracture deducting nearly 1-8th in. diameter from area.
9 Tested at Maligakanda.
10 All these had air-holes at section of pressure.
11 Tested at Breakwater. Bit of dirt in middle reducing area by 1-8th in. diameter.
12 Air-hole at side. Cement lumpy.
13 Several air-holes.
14 Robins & Co. (Old.)
15 Robins & Co. (Stood three minutes.)
16 Robins & Co. (New.)
17 Tunnel Co.
18 Tunnel Co. (Cement.)
19 Air-holes at fracture.
20 Falcon (Cement.)
21 Falcon.
22 Tunnel Co. No air-holes.
23 Do. Few air-holes.
24 Falcon. do.
25 Do. Air-holes.
26 Do. No air-holes.
27 Do. Very few air-holes.

Date of making Briquette. 1886.	Date of Testing. 1886.	Age in Days.	Total Breaking Strain. lbs.	Name of Store or Ship.
July 22	July 30	8	615	— 1
22	30	8	623	— 1
24	30	6	530	— 1
20	Aug. 9	20	985	— 2
20	9	20	920	— 3
Aug. 3	9	6	685	— 3
3	9	6	729	— 3
July 19	9	21	912	— 4
19	9	21	908	— 4
26	9	14	895	— 4
26	9	14	873	— 4
Aug. 2	9	7	710	— 4
2	9	7	765	— 4
July 13	13	31	761	— 2
13	13	31	1,130	— 2
24	13	20	785	— 2
29	13	15	928	— 2
29	13	15	942	— 2
Aug. 5	13	8	757	— 2
5	13	8	827	— 2
July 21	13	23	910	— 5
21	13	23	832	— 5
28	13	16	770	— 5
28	13	16	875	— 5
Aug. 6	13	7	710	— 5
6	13	7	675	— 5
July 30	20	21	968	— 6
30	20	21	1,080	— 6
Aug. 4	20	16	900	— 5
4	20	16	830	— 5
13	20	7	500	— 7
13	20	7	515	— 7
June 5	20	76	1,225	— 8
July 27	20	24	497	— 9
31	20	20	700	— 1
31	20	20	700	— 1
Aug. 7	20	13	830	— 1
7	20	13	755	— 1
12	20	8	703	— 2
12	20	8	677	— 2
21	27	6	585	— 1
21	27	6	583	— 1
16	27	11	820	— 2
16	27	11	870	— 2
20	27	7	525	— 5
20	27	7	582	— 5
11	27	16	1,000	— 5
11	27	16	885	— 5
9	27	18	952	— 5
9	27	18	922	— 5
18	Sept. 3	16	1,005	— 7
18	3	16	860	— 6
29	3	5	640	—10
29	3	5	645	— 1
19	3	15	740	— 1
19	3	15	755	— 2
27	3	7	500	—11

Date of making Briquette. 1886.	Date of Testing. 1886.	Age in Days.	Total Breaking Strain. lbs.	Name of Store or Ship.
Aug. 23	Sept. 10	18	700	— 11
23	10	18	745	— 11
28	10	13	615	— 11
28	10	13	750	— 11
Sept. 3	10	7	520	— 11
3	10	7	515	— 11
July 6	10	66	1,010	— 2
Aug. 10	10	31	1,135	— 2
10	10	31	1,160	— 2
17	10	24	1,030	— 5
17	10	24	1,018	— 5
24	17	24	865	Breakwater 12
24	17	24	660	— 12
Sept. 4	17	13	610	— 11
4	17	13	572	— 11
10	17	7	512	— 11
10	17	7	592	— 11
Aug. 31	17	17	815	— 2
31	17	17	755	— 2
Sept. 1	24	23	745	— 10
1	24	23	792	— 1
15	21	9	792	— 1
Aug. 25	24	30	765	Breakwater 11
25	24	30	742	— 11
Sept. 8	24	16	792	— 11
8	24	16	817	— 11
11	24	13	562	— 13
11	24	13	402	— 12
17	24	7	592	— 11
17	24	7	410	— 11
Oct. 28	Nov. 4	7	560	— 14
28	4	7	520	— 14
29	5	7	480	— 14
29	5	7	410	— 14
30	6	7	468	— 14
30	6	7	565	— 14
Nov. 1	8	7	682	— 14
3	11	8	557	— 15
5	12	7	475	— 16
Oct. 22	12	21	835	— 17
22	12	21	720	— 17
Sept. 28	12	15	850	— 18
28	12	45	855	— 18
Nov. 8	15	7	600	— 16
11	19	8	705	— 16
11	19	8	645	— 16
6	19	13	910	— 16
6	19	13	500	— 16
5	19	14	590	— 14
Oct. 21	19	30	750	— 17
21	19	29	963	— 17
Nov. 10	26	16	795	— 16
10	26	16	935	— 16
6	26	20	530	— 16
4	26	22	670	— 14
4	26	22	655	— 14

1 Falcon. Few air-holes.
2 Falcon. Very few air-holes.
3 Falcon. Few small holes.
4 Tunnel. Few small holes.
5 Tunnel. Very few air-holes.
6 Tunnel. No air-holes.
7 Tunnel. Few air-holes.
8 Tunnel. *Not broken.*
9 Falcon. Air-holes.
10 Falcon. No air-holes.
11 Vulcan. Very few air-holes.
12 Vulcan. Few air-holes.
13 Vulcan. No air-holes.
14 White Bros. Very few air-holes.
15 Burbanc. Sun-dried.
16 Do. Very few air-holes
17 Robins. do.
18 Vulcan do.

A. W. BURNETT.

C (a).

GAUGINGS OF FILLING OF RESERVOIR.—OCTOBER, 1885. (*See also Diagrams F 1 and F 2.*)

Date. 1885.	Time of Gauging.	Depth on 7 ft. Gauge in.	Level of Reservoir. ft. in.	Rise in Reservoir. in.	Calculated Gallons over 7 ft. Gauge.	Actual Gallons received in Reservoir.	Percentage of actual quantity to calculated quantity. Minus	Plus
Sept. 30	10 am	1	Water started		Approximate 1,497,249 gallons	—	—	—
	5 pm	1	0 10½	10½		—	—	—
	5 pm	Opened valve to Lake	—				—	—
	10 pm	0	Stopped to Lake			—	—	—
Oct. 1	7 am	1	1 6	7½		—	—	—
	9 15 am	1¼	1 8	2		—	—	—
	10 am	1½	—	—		—	—	—
	3 pm	1¼	2 2	6		—	—	—
	5 30 pm	1¼	2 4	2			—	—
Oct. 2	6 am	1⅝	3 9¼	17¼		—	—	—
	9 am	1⅝	4 1	3½		—	—	—
	12 noon	1⅞	4 5¼	4½		—	—	—
	3 pm	1⅝	4 9½	4		—	—	—
	6 pm	1⅝	5 2	4½		Total to 6 6" deep	—	—
Oct. 3	6 am	1⅝	6 6	16		1,331,883	—	—
	9 am	1⅞	6 10½	4½	83,580	81,856	Mean 9·77 —	1½
	12 noon	1⅞	7 2	3½	83,580	65,983	21	—
	3 pm	1⅞	7 6	4	83,580	75,410	9·77	—
	6 pm	1⅞	7 10	4	83,580	75,410	9·77	—
Oct 4	6 am	1⅞	9 1	15	334,320	282,786	15·41	—
	9 am	1⅞	9 5	4	83,580	75,410	9·77	—
	12 noon	1⅞	9 8¼	3¼	83,580	65,983	21·0	—
	3 pm	1⅞	10 0	3½	83,580	65,983	21·0	—
	6 pm	1¼	10 3	3	78,845	56,557	28·14	—
Oct. 5	6 am	1⅞	11 6	15	315,380	282,786	10·33	—
	9 am	1⅞	11 10¼	4¼	83,580	81,856	Mean 9·77 —	1½
	12 noon	1⅞	12 2	3½	83,580	65,983	21	—
	1 pm	Water stopped	—	—	—		—	—
	9 30 pm	Water turned on	—	—			—	—
Oct 6	6 am	1¼	12 11	9			—	—
	7 30 am	Water stopped	Rain 12 11¼	0¼	—	—	—	—
Oct 7	5 30 pm	"	13 0¼	1¼	—	—	—	—
Oct 8	6 am	"	13 0¼	—	—	—	—	—
Oct 9	6 am	"	13 0¼	—	—		—	—
	5 30 pm	"	13 0¼	—	—	—	—	—
Oct 10	6 am	"	13 0¼	—	—	—	—	—
	9 25 am	Water put on						
		1⅛	13 0¼	—	—	—	—	—
	12 noon	1⅛	13 4¼	3½	71,972	65,983	8·32	—
	3 pm	1⅛	13 8	3¼	83,580	70,696	15·41	—
	6 pm	1⅛	11 0¼	4¼	93,590	81,836	9·35	—
Oct 11	6 am	1⅛	15 7	18¼	391,062	348,770	11·5	
	9 am	1⅛	15 11	4	93,427	75,410	19·28	—
	12 noon	1⅛	16 3	4	93,427	75,410	19·28	—
	3 pm	1⅛	16 7	4	93,427	75,410	19·28	—
	6 pm	1⅛	16 11½	4½	93,427	81,836	9·18	—
Oct 12	6 am	1⅛	18 4½	17¼	373,708	320,191	14·24	—
	9 am	1⅛	18 9	4½	93,427	81,836	9·18	—
	12 noon	1⅛	10 1	4	93,427	75,410	19·28	—
	3 pm	1⅛	19 5	4	93,427	75,410	19·28	—
	6 pm	1⅛	16 9½	4½	93,427	84,836	9·18	—
Oct 13	6 am	1⅞	21 1¼	16	354,015	301,639	14·8	—
	9 am	1⅞	21 5½	4	83,580	75,410	9·77	—
	12 noon	1⅞	21 8½	3	78,845	56,557	Mean 13·25 28·27	—
	3 pm	1⅞	22 0¼	4	74,110	75,410	—	1·76
	6 pm	1⅞	22 4	3½	74,110	65,983	10·97	—
Oct 14	6 am	1¼	23 4	12	296,410	226,229	23·70	—
	9 am	1¼	23 5¼	1½	74,110	28,278	61·84	—
	12 noon	1¼	23 6¼	1	56,348	18,852	66·54	—
	3 pm †	1¼	23 7½	1	56,348	18,852	66·54	—
	6 pm	1	23 8	0½	40,330	9,426	76·63	—
Oct 15	6 am	1	23 10	2	161,319	37,705	76·63	—
	9 am	1	23 10½	0½	40,330	9,426	76·63	—
	12 noon	1	23 11	0½	40,330	9,426	76·63	—
	3 pm	1	23 11½	0½	40,330	9,426	76·63	—
	6 pm	1	24 0	0½	40,330	9,426	76·63	—
Oct 16	6 am	1	24 1¾	1¾	161,319	32,991	79·55	—
	9 am	1	24 2	0¼	40,330	4,713	88·31	mean
	11 55 am	1	24 2¾	0¾	39,210	14,139	63·94	76·13
	11 55 am	Water turned through waste pipe to Lake from Reservoir ½ in. up and round branch pipe [from inlet						
	12 30 pm	Waste valve raised to 2 in		—	—	—	—	—
	12 55 pm	—	23 7½	—	—	—	—	—
	1 30 2 pm	Waste valve raised from 2 in to 4 in. up			—	—	—	—
	1 55 pm	—	22 3	—	—	—	—	—
	2 30 pm	Waste valve raised to be 6 in up			—	—	—	—
	2 50 pm	do	12 in. up	—	—	—	—	—
	2 55 pm	--	19 10	—	—	—	—	—

* Valve closed to give 1¼ in

† Valve closed to give 1 in.

Date. 1885.	Time of Gauging.	Depth on 7 ft. Gauge. in.	Level of Reservoir. ft. in.	Rise in Reservoir. in.	Calculated Gallons over 7 ft. Gauge	Actual Gallons received in Reservoir.	Percentage of actual quantity to calculated quantity. Minus	Plus
Oct. 16	3.00 pm	Waste valve raised 18 in. up		—	—	—	—	—
	3.55 pm	—	16 9	—	—	—	—	—
	3.30 pm	Waste valve raised to be 20 in. up			—		—	—
	4.55 pm	—	14 0	—	—	—	—	—
	5.55 pm	—	11 1	—	—	—	—	—
	7.00 pm	—	8 4	—	—	—	—	—
	8.00 pm	—	5 5½	—	—	—	—	—
	8.15 pm	—	4 6	1st below bench (south) waste valve closed				—
About	8 45 pm	Waste valve opened again gradually to 8 in. up				—	—	—
About	10.00 pm	—	2 6	Waste valve raised 10 in up and left to empty Reservoir. Probably empty about 11 30 pm				

As to Gaugings and Water received and lost

As to average coefficient of correction on gauge at inlet compared with water actually received in Reservoir -

	1885.	Hours	Minus percentage	
Mean Coefficient 13·87	Oct. 3 day	12	mean 9·77	6 ft. 6 in in Reservoir
	3 and 4 night	12	15·41	-
	4 day	12	mean 19·98	-
	4 and 5 night	12	10·33	
Mean Coefficient 13·42	5 day	6 9.77	mean 10·55	-
	10 day	6 11 33		
	(From October 7 to 10 water stood steady—13 ft. 0¾ in. deep.)			
	10 and 11 night	12	11·50	—
	11 day	12	mean 16 75	—
	11 and 12 night	12	14 24	—
	12 day	12	mean 14·23	—
	12 and 13 night	12	14 80	—
	13 day	12	mean 11·81	Depth 22 ft 4 in in Reservoir
Leakage existing	13 and 14 night	12	23·70	
	14 day	12	mean 67·89	
	14 and 15 night	12	76·63	
	15 day	12	76 63	
	15 and 16 night	12	79 55	
	16 day	6	76·13	24 ft. 2¾ in in Reservoir

Wall broke between 10 and 10·15 am on October 16.

Mean percentage for coefficient of gauge at inlet from 6 am on October 3 to 6 pm on October 13 13·58 of loss on calculated quantity as received in Reservoir.

As to Quantity of Water lost in the Leakage

Night of October 13–14.—

	Gallons
6 pm to 6 am by gauge	296,440
Less coefficient of correction, 13·58 per cent.	40,256
Actual delivered	256,184
Received in Reservoir	226,229
Loss by leakage in 12 hours	29,955

Loss 2,500 gallons per hour, 0 112 c. ft. per sec

From 6 am to 9 am on October 14, 3 hours.—

Delivered by gauge	74,110
Less coefficient of correction, 13·58 per cent.	10,064
Actually delivered	64,046
Received in Reservoir	28,278
Loss by leakage during 3 hours	35,768

Say 12,000 gallons per hour, 0·535 c. ft. per sec

From 6 am on October 14 to 12 noon on October 16.—

Delivered by gauge	790,634
Less coefficient of correction, 13·58 per cent.	107,368
Actually delivered	683,266
Received in Reservoir	202,660
Loss by leakage during 54 hours	480,606

Loss (average) 8,900 gallons per hour, 0·397 c. ft. per sec.

October 28, 1885.

C (b).

Gaugings of Filling of Reservoir.—December, 1886.

Date. 1886.	Time.	Reservoir Gauge below top Water-level. ft.	in.	Seven Feet Inlet Gauge. in.	Rise in Reservoir. in.	Remarks.
Dec. 1	10·45 pm	30	0	—	—	Commenced to shut 27 in. sluice valve.
	11·30 pm	29	11	1½	1	Regular flow established.
	12 pm	29	10¾	1½	0¼	—
Dec. 2	6 am	29	4	1½	6¾	—
	7·45 am	29	1½	1½	2½	—
	8·25 am	29	1	1½	0½	Water off, leak at 5th mile
	12 noon	29	1	—	—	—
	3 pm	29	1	—	—	—
	6 pm	29	1	—		—
	6·15 pm	29	1		—	Water started running.
	6·40 pm			1½		Regular flow established
	9 pm	28	10	1½	3	
Dec 3	6 am	27	7½	1½	14½	—
	9 am	27	4½	1½	3	—
	12 noon	27	1½	1½	3	Flow very irregular
	3 pm	26	9	1½	3½	—
	6 pm	26	5	1½	4	—
	9 pm	26	1½	1½	3½	—
Dec 4	6 am	25	0½	1½	13	Water turned off and run down to cement holes in south wall.
	8·11 am	24	10	1½	2½	
	9·50 am	26	4¼		—	Sluice valve shut down
	12 noon	26	4¼	—		—
	3 pm	26	1¼	—		—
	4·50 pm	26	1¼			Commenced to turn on.
	6·10 pm	—		1½		Regular flow established
	9 pm	26	0	1½	1¼	—
Dec 5	6 am	24	8	1½	16	
	9 am	24	7½	1½	4½	
	12 noon	23	11¼	1½	4¼	
	3 pm	23	6½	1½	1½	—
	6 pm	23	2	1½	4½	—
	9 pm	22	9½	1½	4½	—
Dec. 6	6 am	21	5	1½	16½	—
	9 am	21	1½	1½	4½	1½in. flow about 5 minutes.
	9·30 am			1½	—	
	12 noon	20	8	1½	4½	—
	3 pm	20	3½	1½	4½	—
	5·30 pm	20	0	1½	3½	20 ft. bare.
	9 pm	20	0	—	—	do
Dec. 7	6 am	20	0			do
	9 am	20	0	—	—	do
	12 noon	20	0	—	—	do.
	3 pm	20	0			do.
	6 pm	20	0	—	—	do.
	9 pm	20	0		—	do
Dec. 8	6 am	20	0		—	do
	9 am	20	0	—	—	do.
	12 noon	20	0	—		do.
	3 pm	20	0		—	do.
	6 pm	20	0		—	do.
	6·10 pm	—		1½	—	Regular flow established.
	9 pm	19	8½	1½	3½	—
	12 night	19	5	1½	3½	—
Dec 9	3 am	19	1½	1½	3½	—
	6 am	18	10½	1½	3	—
	9 am	18	7	1½	3½	
	12 noon	18	3½	1½	3½	—
	3 pm	18	0	1½	3½	—
	6 pm	17	8¼	1½	3¼	—
	9 pm	17	5½	1½	3¼	—
	12 night	17	2	1½	3½	—
Dec 10	3 am	16	10½	1½	3½	—
	6 am	16	7¼	1½	3¼	—
	9 am	16	4	1½	3¼	—
	12 noon	16	0¾	1½	3¼	—
	3 pm	15	9½	1½	3¼	—
	6 pm	15	6¼	1½	3¼	—
	9 pm	15	3¼	1½	3	—
	12 night	15	0¼	1½	3	Flow very irregular
Dec 11	3 am	14	9½	1½	2¾	—
	6 am	14	6½	1½	3	—
	9 am	14	3¼	1½	3¼	Flow irregular from 9 to 11 am.
	12 noon	14	0	1½	3¼	Flow irregular from 9 to 12.
	3 pm	13	8¾	1½	3¼	—
	6 pm	13	5½	1½	3¼	—
	9 pm	13	2½	1½	3	Flow very irregular from 6 to 9 pm
	12 night	12	11½	1½	3	—
Dec 12	3 am	12	8¼	1½	3¼	—
	6 am	12	5	1½	3¼	—
	9 am	12	1¾	1½	3¼	—
	12 noon	11	10½	1½	3¼	—
	3 pm	11	7¼	1½	3¼	—
	6 pm	11	4¼	1½	3	—
	9 pm	11	1¼	1½	3	—
	12 night	10	10¼	1½	3	—

Date. 1886	Time.	Reservoir Gauge below top Water-level. ft. in	Seven Feet Inlet Gauge. in.	Rise in Reservoir. in.	Remarks.
Dec. 13	1.30 am	10 9	$1\frac{1}{2}$	$1\frac{1}{4}$	$2\frac{1}{8}$ only. Water turned off
	3 am	10 $9\frac{3}{8}$	—	—	Loss $\frac{3}{8}$ in. in $1\frac{1}{2}$ hour.
	3·30 am	10 $9\frac{1}{2}$	—	—	Loss $\frac{1}{2}$ in. in 2 hours. Opened sluice valve
	4 am	11 6	—	—	—
	4 15 am	12 5	—	—	—
	4·30 am	13 0	—	—	Sluice valve open full
	6 am	15 $0\frac{1}{4}$			Loss $\frac{3}{4}$ in. $1\frac{1}{2}$ hour. Sluice valve shut down. Opened sluice valve
	7·30 am	15 $0\frac{5}{8}$			
	9 30 am	19 $11\frac{7}{8}$		—	Shut down sluice valve
	10·30 am	19 $11\frac{15}{16}$		—	Loss $\frac{5}{8}$ in. in $3\frac{1}{2}$ hours.
	12·30 pm	20 $0\frac{3}{16}$		—	
	1 pm	20 $0\frac{1}{2}$			Opened sluice valve
	2·55 pm	24 $11\frac{7}{8}$			Shut down sluice valve.
	3·55 pm	24 $11\frac{15}{16}$	—	—	Loss $\frac{1}{8}$ in. in 3 hours
	5 55 pm	25 0			Neat sluice valve opened full. Reservoir emptied.

C (c).

GAUGINGS OF FILLING OF RESERVOIR.—FEBRUARY, 1887.

Date. 1887.	Time.	Reservoir Gauge below top Water-level. ft. in.	Depth on Inlet Gauge in.	Rise in Reservoir. in.	Remarks.
Feb. 13	9 pm	20 1	$3\frac{1}{2}$	—	Stopped putting in water for the night
Feb. 14	6 am	20 1	—	—	
	7 am	19 8	$3\frac{1}{2}$	5	
	8 am	19 3	$3\frac{1}{2}$	5	
	9 am	19 0	2 to $3\frac{1}{2}$	3	Water very unsteady in the inlet tank.
	10 am	18 9	2 to $3\frac{1}{2}$	3	
	11 am	18 4	$3\frac{1}{2}$ to 4	5	
	12 noon	17 11	$3\frac{1}{2}$ to 4	5	
	1 pm	17 $5\frac{1}{2}$	4	$5\frac{1}{2}$	
	2 pm	17 $0\frac{1}{2}$	4	5	Water very steady in inlet
	3 pm	16 7	$4\frac{1}{8}$	$5\frac{1}{4}$	
	4 pm	16 $1\frac{1}{2}$	$4\frac{1}{8}$	$5\frac{1}{4}$	Water steady
	5 pm	15 8	$4\frac{1}{8}$ to $4\frac{1}{8}$	$5\frac{1}{4}$	Water nearly steady
	6 pm	15 $2\frac{1}{2}$	$4\frac{1}{8}$	$5\frac{1}{4}$	Water steady
	7 pm	14 9	$4\frac{1}{8}$ to $4\frac{1}{2}$	$5\frac{1}{2}$	Rose up during this hour to $4\frac{1}{2}$
	8 pm	14 3	$4\frac{1}{2}$	6	Steady.
	9 pm	13 $8\frac{3}{4}$	$4\frac{3}{8}$	$6\frac{1}{4}$	Steady.
Feb. 15	3 am	10 $5\frac{1}{2}$	$4\frac{3}{8}$	$39\frac{1}{4}$	—
	4 am	9 11 full	$4\frac{3}{4}$	$6\frac{1}{2}$	Go to stop the water
	4.15 am	—	—	—	Water nearly stopped.
	4.20 am	—	—	—	Water totally stopped
	4.30 am	9 $9\frac{1}{2}$	from $4\frac{3}{4}$ to 0 in 20 minutes	—	—
	5 am	9 $9\frac{1}{2}$	—	—	—
	7 am	9 $9\frac{1}{2}$	—	—	—
	8 am	9 $9\frac{1}{2}$	—	—	—
	8.40 am	—	—	—	Begin to put in water
	9 am	9 $7\frac{1}{4}$	4 to $4\frac{1}{8}$	$1\frac{3}{4}$	Fairly steady.
	10 am	9 2	$4\frac{1}{8}$	$5\frac{3}{4}$	Slightly unsteady
	11 am	8 $8\frac{3}{4}$	4 to $4\frac{1}{4}$	$5\frac{1}{4}$	Up and down at 4 to $4\frac{1}{4}$ the whole hour.
	12 noon	8 $3\frac{1}{2}$	4 to $4\frac{1}{2}$	$5\frac{1}{4}$	
	1 pm	7 $9\frac{1}{4}$	4 to $4\frac{1}{2}$	$6\frac{1}{4}$	—
	2 pm	7 4	$4\frac{1}{4}$	$5\frac{1}{4}$	—
	3 pm	6 $10\frac{1}{4}$	$4\frac{1}{4}$	$5\frac{3}{4}$	Water very steady.
	4 pm	6 $4\frac{3}{4}$	4 to $4\frac{1}{4}$	$5\frac{1}{2}$	Gauge keept at $4\frac{1}{4}$, or $\frac{3}{4}$ of an hour and then 4 in. for 15 minutes.
	5 pm	5 11	$4\frac{1}{8}$	$5\frac{3}{4}$	Steady.
	6 pm	5 $5\frac{3}{4}$	$4\frac{1}{8}$	$5\frac{1}{4}$	Steady.
	7 pm	5 $0\frac{1}{8}$	$4\frac{1}{4}$	$5\frac{5}{8}$	Steady.
	7 5 pm	water is stopped	—	—	—
	7 30 pm	4 $11\frac{1}{8}$	—		Water in Reservoir almost still.
	9.30 pm	4 $11\frac{1}{8}$	—	$\frac{1}{8}$ bare loss	—
Feb. 16	6 am	5 0	—		—
	6.15 am	5 0	—		Begin to fill.
	7 am	4 $8\frac{1}{2}$	$3\frac{7}{8}$	$3\frac{1}{2}$	—
	8 am	4 $3\frac{1}{2}$	$3\frac{7}{8}$	5	
	9 am	3 $10\frac{1}{2}$	$3\frac{3}{4}$	5	Unsteady.
	10 am	3 $5\frac{1}{2}$	$3\frac{7}{8}$	5	Unsteady.
	11 am	3 $0\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{3}{4}$	Unsteady. This kept going from $3\frac{1}{2}$ to $3\frac{7}{8}$, and for a few minutes 4 in
	12 noon	2 $7\frac{3}{4}$	$3\frac{7}{8}$	5	Unsteady.
	1 pm	2 2	$4\frac{1}{4}$	$5\frac{3}{4}$	Steady.
	2 pm	1 9	$4\frac{1}{8}$	5	At 2.25 the *sluice* valve was stopped from leaking.
	3 pm	1 $3\frac{1}{2}$	$3\frac{1}{2}$?	$5\frac{1}{2}$	—
	3.55 pm	0 10	4	$5\frac{1}{2}$	
		Burst.	*Began to empty.*		
	6 pm	10 0	—	—	9 in. 2 hours.
	8 pm	16 0	—	—	6 in. 2 hours.
	12 pm	26 6	—	—	—

A. W. BURNETT.

D.

Measurement of Size of Cracks.

(February—March, 1887.)

Date	Time.	North-East Corner. Parapet. Neat.	North-East Corner. Parapet. Wedge.	North-East Corner. Bottom. Inside	North-East Corner. Bottom. Outside.	South-East Corner. Parapet. Neat.	South-East Corner. Parapet. Wedge.	South-East Corner. Bottom. Inside.	South-East Corner. Bottom. Outside.
1887.		in	in	in	in.	in.	in	in	in.
February 16	Estimated	1¼		–	¾	1	—	–	¾
Do 17		¾		7-16	¾	¾	–		¾
Do 18		¾		7-16	¾	¾	–		¾
Do 19		¾		7-16	¾	¾	—		¾
Do 21		¾		¾ base	7-16	¾	—		¾
Do 22		¾		¾	7-16	¾	—		¾
Do 23	12 noon	¾ base		¾ "	7-16	¾	—	base	¾ base
Do 23	2 pm	¾ "	–	¾ "	7-16	¾	–	"	¾ "
Do 23	4 pm	¾ "	–	¾ "	7-16	¾	—	"	¾ "
Do. 24	6 am	¾ "	–	¾ "	7-16	¾		"	¾ "
Do 24	12 noon	¾ "	–	¾ "	7-16	¾			¾
Do 24	2 pm	¾ "	–	¾ "	7-16	¾	–	"	¾
Do 24	5.30 pm	¾	¾	¾	7-16	¾	¾	"	¾
Do 25	6.30 am	¾	¾	¾	7-16	¾	¾	3-16	3-16
Do 25	1 pm	9-16	¾	5-16	7-16	¾	¾	3-16	3-16
Do 25	5.30 pm	9-16	¾	5-16	7-16	¾	¾	3-16	3-16
Do 26	6.30 am	9-16	¾	5-16	7-16	¾	¾	3-16	3-16
Do 26	11 am	9-16	9-16	5-16	7-16	¾	9-16	3-16	3-16
Do 26	2 pm	9-16	9-16	5-16	7-16	¾	9-16	3-16	3-16
Do. 28	6.30 am	9-16	¾	5-16	7-16	¾	¾	3-16	3-16
Do. 28	2 pm	9-16	¾	5-16	7-16	¾	¾	3-16	3-16
March 11	2 pm	9-16	¾	5-16	7-16	¾	¾	3-16	3-16

A. W. Burnett.

E.

Levels of Nails in Face of Walls above Footing.

Date		North Wall. 20 ft. from west end.	North Wall. Centre.	North Wall. 20 ft from east end.	East Wall. 20 ft. from north end.	East Wall. 17 ft. from north end.	East Wall. Centre	East Wall. 20 ft. from south end.	South Wall. 20 ft from east end.	South Wall. Centre.	South Wall. 20 ft. from west end.
1886											
June	21	—	—	—	—	70,235	70,225	—	—	—	—
Do.	23	—	—	—	—	70,240	70,230	—	—	—	—
Do.	24	—	—	70,245	70,260	—	—	70,240	—	—	—
Do	26	—	—	—	70,260	70,240	70,225	—	—	—	—
July	22	—	—	70,240	70,260	70,240	70,230	—	—	—	—
August	13	70,240	70,220	70,240	70,255	70,240	70,220	70,235	70,230	70,240	70,235
Do	20	70,235	70,220	70,245	70,255	70,235	70,220	70,235	70,230	70,235	70,235
September	17	70,240	70,230	70,240	70,260	70,240	70,225	70,240	70,230	70,240	70,230
November	15	70,245	70,230	70,245	70,260	70,235	70,225	70,235	70,230	70,235	70,225
1887											
February	18	70,240	70,230	70,250	70,270	70,250	70,235	70,245	All nails	pulled	out.
Do.	19	70,235	70,225	70,250	70,270	70,250	70,230	70,240	—	—	—
Do.	25	70,240	70,230	70,245	70,265	70,245	70,230	70,235	New	nails	put in.
March	11	70,245	70,235	70,245	70,265	70,245	70,230	70,245	70,240	70,255	70,235

A. W. Burnett.

F.

Calculations of the Resultant of the Pressures on The Walls, with Statical Diagrams (Plans G 1 and G 2).

The method adopted for investigating the stability of the wall is as follows :—A type section is adopted, taken vertically, and normal to the outer face ; and a segment with these dimensions, and having a horizontal width of one foot on the water face, is placed under consideration. The forces acting on it are compounded graphically, and a line of resistance is constructed showing the results of the investigation.

Having our segment drawn accurately to scale, as in the figures, plans G 1 and G 2, we proceed to examine the statical conditions at various horizontal sections throughout the height of the wall, commencing at the top.

The forces determining these conditions are :—(1) The weight of the mass of the wall above the section, acting vertically ; (2) The total thrust of the water on the back of the wall from the top water level down to the section under consideration, acting normally to the surface of the wall at each point. (See note on Fortuitous Forces.)

These two forces are compounded, and the point in which the resultant cuts the horizontal section under consideration is a point in an imaginary line called the "line of resistance."

By joining the points so found in the successive horizontal sections, the line may be constructed. It can be shown that if at any point this line of resistance falls outside the middle third of the wall section, there will be a tension in the surface of the wall opposite to that which the line of resistance tends to approach. The wall should therefore be so proportioned that this shall not happen, it being an engineering axiom that masonry in construction should never be in tension.

Fig I., plan G 2, is a type section, similar to plan E, supplied by the Engineer of the Maligakanda Reservoir, representing the mean dimensions of the wall, with the curved footing added inside after the first failure. The water is shown at its full height of 100 ft. above mean sea level The section is divided, for the sake of calculation, horizontally into blocks designated by the letters *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*.

Having found the centres of gravity (*a*, *b*, *c*, &c.) of these blocks, also their weights (W*a*, W*b*, W*c*, &c) in tons and decimals (taking the specific gravity of the concrete used as 2·2, which gives 138 lbs. as the weight of a cubic foot), we proceed to form the force-polygon and funicular of weights (figs. II. and III , plan G 2) in the following manner :—

Set off to some convenient scale (here ½ inch 1 ton) W*a*, W*b*, &c., in alphabetical order along the line YY′ parallel to the line of action of the forces W (*i.e.*, vertically) Take any point O and join it to the ends of the force lines W by the lines OY, O$^a/_b$, O$^b/_c$, O$^c/_d$, O$^d/_e$, O$^e/_f$, O$^f/_g$, O$^g/_h$, OY′.

Next form the "funicular polygon," fig. III. Through the centres of gravity *a*, *b*, *c*, draw vertical lines *aa*′, *bb*′, *cc*′, &c. Draw Y*a*′ parallel to YO, cutting *aa*′ in *a*′ ; *a*′*b*′ parallel to O$^a/_b$; *b*′*c*′ parallel to O$^b/_c$, and so on, producing all these lines to cut Y*a*′ produced in B, C, D, E, F, G, H. The vertical BB′ will pass through the common centre of gravity of blocks *a* and *b* ; *cc*′ will pass through that of blocks *a*, *b*, and *c*, and so on.

We now have all the vertical loads and their lines of action, and will turn to the horizontal and inclined loads due to water pressure, and form then force polygon and funicular.

The total water pressure on a vertical rectangular plane surface, with its edge at the surface of the water, is—

P = ½ Gh^2 b

Where G = weight of cubic foot of water (taken here as 62·5 lb.)
h = Height of rectangular surface
b = Width

Therefore, the pressures on blocks *a*, *b*, *c*, and *d*, having their bases at 2·5, 12·5, 22·5, and 31·08 ft. respectively below the water surface, will be :—

P*a* = 0·087 tons
P*b* = 2·092 ,,
P*c* = 4·884 ,,
P*d* = 6·413 ,,

all being normal to the face of the wall, *i.e.*, horizontal.

The line of action of P*e* on the water face of the block *e* will be approximately the radius of curvature at the middle point of the face, and the total pressure on the face will be :—

P*e* = G × 30·179 × 1·5 = 1·330 tons

30·179 being the depth of the centre of the face below top water level, and 1·5 being the height in feet measured on the face.

Similarly—

P*f* = 1·386 tons
P*g* = 1·726 ,,
P*h* = 2·683 ,,

Setting off these forces with their correct magnitudes and directions (fig. IV., plan G 2), and transferring the resultant—

PA (= P*a*) . . ..to $^a/_b$ in fig. II.
PB (= P*a* + P*b*).....to $^b/_c$,,
PC (= P*a* + P*b* + P*c*).....to $^c/_d$,,
PD (= P*a* + P*b* + P*c* + P*d*).....to $^d/_e$,,
PE (as in diagram).....to $^e/_f$,,

and so on, we are able to compound the weights and pressures by drawing RA, RB, RC, &c., which represent in direction and magnitude the total resultant forces at each successive section.

Proceeding now to form the funicular polygon of pressures (fig V.) in a similar way to fig. III., using the direction-lines through the centres of water pressure (marked CPA, CPB, &c.), we obtain the points of application (A′, B′, &c.) of the total resultants RA, RB, &c.

Through the points A′, B′, C′, &c., thus found, draw lines parallel to the resultants RA, RB, &c. The points in which these lines cut the bases of their respective blocks are points in the line of resistance when the reservoir is full

The points of intersection between BB′ and the base of block *b*, CC′ and the base of *c*, &c., are points on the line of resistance for the empty reservoir.

Fig I., plan G 1, shows the type section (similar to plan D) of the wall before the first failure in October, 1885, *i.e.*, without the curved inside footings. The lines of resistance for reservoir full and reservoir empty are constructed in an exactly similar way to that described above ; the funicular polygon of water pressures, however, in this case being dispensed with, as these pressures are all parallel and horizontal. The figure YOX (fig. II.) shows how the total weight of the wall YO is compounded with the successive pressures due to various depths of water. These pressures are designated by a P with an index, showing the corresponding depth of water in feet (*e.g.*, P_{12} means the pressure due to 12 ft. of water). By drawing lines parallel to these resultants YP, through points in the line EE′ (the vertical through centre of gravity of wall, fig. I., plan G 1) at heights above the floor line equal to one-third of the respective depths of water, and producing these lines till they cut the base of the figure, we obtain the points marked 12′, 18′, 24′4″, &c., which are the centres of pressure on the base of the wall, with the various specified heads of water.

It will be observed that the resultant corresponding to 34 ft. head of water cuts the base at the outside limit of the "middle third."

Note on Fortuitous Forces.—Besides the forces taken into consideration in the above calculations there are others which affect favourably or prejudicially, and in varying degrees, the stability of the wall. A few examples of these are :—

(1) Resistance to bending of concrete floor.
(2) Earth pressure on outside of wall.
(3) Tensile resistance of adjoining walls.
(4) Tensile resistance of the tie-bars in the jack-arches of the roof.
(5) Additional weight of wall due to percolated water in the concrete.
(6) Internal bursting force due to the same cause.

Such fortuitous secondary forces occur in all engineering structures, and it is a matter of experience and judgment with the engineer how far he will avail himself of those which are favourable, but not open to exact computation, and how far he will take notice of those which are of a prejudicial nature, but often of insignificant magnitude.

ALFRED E. WACKRILL,
Trigonometrical Assistant to the Surveyor-General.

G.

Determination of the Specific Gravity of a Piece of Concrete from the Maligakanda Reservoir May 3 and 4, 1887.

1.—*Method of conducting Experiment.*

A cross bar having been weighed alone, the block was suspended from it between two 80-lb. spring balances (distinguished by letters A and B) hung from a beam. The weight was read carefully in this position, with the concrete dry. A tank of water was then raised from below so that the block was completely immersed and swung freely in the water. After an interval of 10¼ hours, the weight of the block thus immersed was again taken; the tank was then removed, and the scales again read for the weight in air of the saturated block.

2.—*The Experiment.*

			lbs.	ozs.
Weight of cross bar alone		A	1	3
		B	1	2
			2	5
Weight of block in air, dry		A	65	1
		B	66	12
			131	13
Less weight of cross bar			2	5
			129	8

The tank raised, and block immersed at 8·15 P.M. on May 3, 1887

Intermediate readings

Weight after 10 minutes	A	36	14	
	B	37	14	
		74	12	
Weight after 25 minutes	A	37	2	
	B	38	0	
		75	2	
Weight after 60 minutes	A	37	2	
	B	38	0	
		75	2	
Weight (in water) after 10¼ hours' immersion (6·30 A.M.)			A 37	7
			B 38	4
			75	11
Less cross-bar			2	5
			73	6
Weight of saturated block, in air			A 66	0
			B 67	13
			133	13
Less cross bar			2	5
			131	8

3.—*Deduction of Specific Gravity.*

			lbs.
Let	Wd = weight of concrete dry, in air		129·500
	Wi " " immersed	=	73·375
	Ws " " saturated, in air	=	131·500

$$\text{Sp. gr} = \frac{Wd}{Ws - Wi} = \frac{129{\cdot}500}{58{\cdot}125} = 2{\cdot}23$$

ALFRED E. WACKRILL,
Trigonometrical Assistant to the Surveyor-General.

XVII.—1887.

REPORT

OF A

COMMITTEE APPOINTED BY HIS EXCELLENCY THE GOVERNOR

TO INQUIRE INTO AND REPORT UPON

THE COST AND STYLE OF VICTUALLING PRISONERS IN THE CEYLON JAILS, AND THE EQUIPMENT AND MANAGEMENT OF JAILS GENERALLY.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON

1887.

Price 25 cents.]

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REPORT.

THE following returns were furnished to the Committee to guide it in its work of inquiry :—

(*a*) Scale of dietary per head for each class of prisoner in the different jails ; also return showing the average monthly cost per head in each of the jails for 1886.
(*b*) Statement of work performed by prisoners in all the jails for the week ending July 9.
(*c*) Numbers of warders, guards, and overseers employed in the different jails, showing the salaries drawn by them ; and detailed return for Węlikaḍa prison.
(*d*) Paper by Captain Thompson for employment of prisoners, *re* intra mural stone-breaking.
(*e*) Correspondence as to European prisoners' work at Węlikaḍa on July 11 and 12.
(*f*) Memorandum showing the dynamic value of work.
(*g*) Returns of Colombo prisoners in the Węlikaḍa and Slave Island jails on August 30, showing their sentences.
(*h*) Return showing value of coir-work in Węlikaḍa jail during 1886.

2. The Committee then proceeded to ascertain from various sources the description and cost of the daily food of the working class and peasantry in the towns and country adjoining the latter, so as to contrast it with that supplied to prisoners in the jails. This was followed by examination of several medical authorities, with the view of ascertaining whether, by reduction of quantity or by substitution of less enticing food, a saving in cost could be affected, or, failing this, whether the punishment could be made more severe by giving prisoners less palatable curries.

In the form of appendices* we annex minutes of evidence given by Drs. Vanderstraaten and Attygalla, by the Maha Mudaliyár, and by two headmen from the Southern and North-Western Provinces. The Committee has not deemed it necessary to record much other evidence of similar purport.

3. Evidence was then taken, principally oral, and mostly in the jails at the time they were visited by the Committee, as to the amount and description of work performed by prisoners, their hours of labour, their meals, and the general management of the jails. In regard to these matters the Committee realises the loss sustained by the illness and death of Captain Thompson, late Deputy-Inspector-General of Prisons, which deprived it, excepting in a few preliminary inquiries, of the benefit of his experience. Appendix II. is a record of Mr. Assistant Superintendent Mooney's evidence, confirmed, as regards the work and discipline of jails, by other evidence and by the result of the inspections made by the Committee.

4. In reply to the circular inviting expression of opinion upon the following points—(1) sufficiency of work ; (2) quantity and quality of food ; (3) jail discipline ; (4) the question of working prisoners inside or outside the jails—the Committee was favoured with the views of the Hon. R. W. D. Moir, Acting Auditor-General, of the Hon. F. R. Saunders, Government Agent Western Province, of the Hon. G. S. Williams, Collector of Customs (and of Mr. E. Elliott, Acting Government Agent Southern Province, on a system of "intermediate imprisonment") ; Mr. Elliott having given his views verbally on the other points. These replies are attached to the appendix, numbered III. A, B, C, and IV.

5. The Committee was favoured with a copy of the paper drawn up by the late Captain Thompson on a system of intermediate imprisonment and "ticket-of-leave" stage. This document is annexed as appendix V.*

6. The following jails were specially visited by the Chairman and Mr. Bosanquet (in one or two cases more than once) :—Węlikaḍa, Slave Island, Breakwater, Hulftsdorp, the two Kandy jails, and Kalutara. At Węlikaḍa and Slave Island the warders and overseers were paraded for examination, so that an opinion might be formed, from their general appearance and physique, of their fitness for the duties devolving upon them. The two members of Committee named regret that circumstances prevented them from visiting other jails. The Inspector-General of Prisons and the Principal Civil Medical Officer being well acquainted with the jails of the Island, there was no necessity for them to join in the special visits.

7. Correspondence between the Military Authorities, the Colonial Secretary's Office, and the Committee, regarding the diet and discipline of European prisoners, is attached to the report, marked appendix VI.

8. Upon the evidence recapitulated, the Committee has arrived at the following conclusions :—

That prison discipline, particularly as regards hard work, is lax, and doubtfully deterrent as a punishment. As regards Colombo, in which nearly half of the prisoners of the whole Island are congregated, it is to a great extent due to the absence of public works involving hard labour, but *generally* to the fact that throughout the whole Colony clause 192 of the "Rules for the Management of Prisons" is constantly ignored—apparently with the express sanction of Government—as the Public Works Department's requirements for labour have to be complied with, though to do so may involve sending outside the jail walls numbers of prisoners in the penal stage. Second-stage prisoners are also sent outside the walls to do such light work as sweeping compounds and roads, cleaning statues, &c., though the men may have been guilty of the most atrocious crimes, and ought to have been employed at industrial hard labour by the "Rules and Regulations for Management of Jails." Both classes are frequently at work outside the prison walls in small parties of two or

* Not printed.

three, involving unnecessary cost in sending a guard of some sort to look after them. As will be seen from appendix 1. A, one man only is often sent to a separate work.

9. That the European prisoners have practically not had any tasked or hard work to perform at Welikada, and that the Committee sees no reason why they should not do the same kind and amount of work as the native prisoners, care being taken to keep Europeans and natives separate from one another.

10. That the majority of the Committee would be glad to see a reduction in the quantity and variety of food, but fear, from the medical evidence, that it is not practicable. They express the opinion, however, that, without impairing the nutritive value of the food, it can be made less agreeable; and they understand from the Principal Civil Medical Officer that some such change is possible without increasing the cost.

The Committee is of opinion that full diet should be carefully restricted to very hard labour, and, in exceptional cases, to unhealthy climates. This diet was introduced at the time heavy Breakwater works were commenced, and though these have long since been finished, the diet is continued and given to men performing labour for whom ordinary diet would be quite sufficient.

10 The Committee doubt whether any further reduction can be made in the cost of prison dieting on the contract rates of this year, taking into account the quality of the food.

11. That a large number of the under-guards in the Colombo jails, and especially at the Convict Establishment, are very unfit from every point of view to enforce discipline even within the walls of the jails, and that outside prisoners have far too much license in such matters as conversation with each other, and being made to do a proper task or amount of work. Many of these overseers live miles away from their jails, involving, with the hours of work and the time taken to go to and from their houses, 16 or 17 hours a day on duty. In many cases the men have to get up soon after 3 A.M. to prepare and be in readiness for their day's work. At the same time, the Committee thinks it is but fair to state that the senior officers appear to be respectable and intelligent, doing their best under varied conditions.

12. That coir-beating appears to the Committee to be a doubtful gain, and not the hardest form of intra-mural industrial labour for the penal and second-stage men, besides being open to the objection that, under certain conditions, it is prejudicial to health. Stone-breaking appears to be neglected more than it should be in Colombo, and apparently in other jails also, where the broken metal could be sold to cover cost, if not to leave a profit.

13. That jail inspection in Colombo by official Visitors appears to be unfrequent and irregular. At Welikada, only nine visits are recorded since November, 1882; at Breakwater, five since 1880; at Slave Island, four since February, 1880; and at Hulftsdorp, none since June, 1877. We understand that no fixed rules are laid down for periodical visits by the official Visitors, as is the case in England The advantages of some arrangement for ensuring this are obvious.

These remarks do not apply to the Principal Civil Medical Officer, Inspector-General of Prisons, or Colonial Surgeons

14. *Clothing of Prisoners.*—We do not think any saving of cost or advantageous alteration can be effected under this heading

15. The Committee wish to place on record their opinion that the prisons visited by them were in a clean and wholesome condition, and that all sanitary arrangements appeared to be well attended to.

Upon the different points alluded to, where change is desirable, the Committee makes the following recommendations.

Warders.

16 (*a*). That as no system of prison discipline can be even moderately effective without a reliable staff of warders, &c., the Committee thinks that in places like Colombo, where the cost of living is dear, the lowest rate of pay should be Rs. 20 or even Rs. 22·50 per month, and that the lowest grade warder should be eligible by good conduct in due course to succeed to the highest post of overseer. In the outstations, where living is cheap, and where local respectable men may be willing to take a small salary rather than seek to improve their position by going further afield, it may be possible to get men to work for as low as Rs. 9 per month, but even in the country it would be advisable to raise the minimum to Rs. 12·50 per month. As regards Colombo, we do not see how good men can be obtained to discharge duties involving special qualifications at wages less than a native cook would receive in an ordinary household. If our recommendations (subsequently given) are in whole or part carried out, a considerable reduction in the prison staff could be made, effecting some saving in cost. Still, the aggregate wages would be increased by probably a few thousand rupees a year for the first year or two, after which it should be possible by proper systems of management to have the wardership of jails performed on the present expenditure.

(*b*) That we also consider it is advisable that 50 per cent. of the warders should live in quarters either within or closely adjoining the Convict Establishments and provincial jails, and that such quarters can, and should, be built by prison labour. This plan would tend to improve discipline, and at the same time provide means of help close at hand in any sudden emergency.

(*c*) That it would be advantageous, and effect a considerable saving of cost to the Prisons Establishment, if the police jail guards were dispensed with and their duties performed by civil guards under the control of the senior officer of the several jails.

Prisoners.

17 (*a*). That the penal stage for all prisoners should be extended to six months, with penal diet for two months as at present; and under no circumstances (except by medical order should they be allowed to go outside the jail during the whole period of their sentence.

(*b*) That, where possible, penal stage prisoners be isolated from the other prisoners, and be supervised by picked warders, to ensure severe discipline.

(*c*) That penal labour be shot-drill, not exceeding two hours a day, with a 14-lb. shot and stands 4 in. high; stone-breaking by task in separate compartments; together with separate confinement and strict silence.

(*d*) That habitual prisoners (*i. e.*, offenders convicted more than three times) should wear a distinctive dress and have penal diet twice a week, on Sundays and Thursdays, after the expiry of the term of continuous penal diet to the end of the first six months.

(*e*) That second stage prisoners, where possible, should be kept at stone-breaking within the walls of the several jails, or employed on works of public service involving *really hard work;* provided that where the work is in contact with free labour or in the vicinity of centres of population, steps be taken to isolate the prisoners as much as possible. Under no circumstances should men in the second stage be put to such extra-mural light labour, as sweeping roads or Government grounds, whitewashing buildings, cleaning public statues, &c.; and, even for intra-mural jail services, if it is absolutely necessary to employ second-stage men, they should be selected from the prisoners sentenced for "misdemeanours."

(*f*) Third-stage prisoners, with less than nine months to serve in this stage, should be available for light labour and positions of comparative trust, as at present. For those having a longer period to serve, it might be of advantage to form them into a convict pioneer gang, and send them into sparsely populated portions of the country to be employed on irrigation works, under necessary, though moderate, police supervision and other safeguards to prevent them interfering with the neighbouring villages. The Committee is somewhat doubtful whether the details for this suggestion given in Mr. Elliott's paper (appendix IV.) and Captain Thompson's (appendix V.*) would be sufficient, and it is also doubtful as to saving of cost (under Prisons Establishment), which is the main reason for recommending this portion of the late Captain Thompson's scheme; but the members of the Committee are unanimous in considering the "Ticket-of-Leave" stage recommended by him unadvisable. Probably, the cost, the advantages, and the defects of the scheme could be ascertained only by a trial.

(*g*) That it would be wise that all prisoners should be able to earn a little money by increased industry, so that, on leaving jail at the expiry of their sentence, they should have a small sum in hand to keep them out of temptation until they obtain work. A portion of the marks now counting to remission of sentence might be devoted to this object. If not possible to grant this to prisoners in penal stage, who cannot earn marks at present, it should, without doubt, be instituted for those in the second and third stages.

(*h*) That prisoners who have committed assault on prison officers, or who have attempted to escape, should be made to wear some distinctive dress.

(*i*) That the hair of all prisoners sentenced to six months and upwards should on admission be cut short, and kept close cropped until within a period of three months of the date of probable release.

Works.

The evidence furnished to the Committee, as well as the reports of the Inspector-General of Prisons in past years, prove that coir-beating is unremunerative; and, in our opinion, it should be discontinued, except for the supply of prison requirements. Instead of it, stone-breaking should be adopted in all jails where the supply can be utilised or sold to cover cost.

As regards Colombo (*vide* appendix II.), that sledged stone or rubble can be delivered from Mahara quarry at Welikada and Slave Island jails at a cost price of Rs. 4·50 per cube of 100 cubic feet, saleable at points of use at Rs. 8 per cube of broken metal (= 66 bushels, or 4·09 tons per cube). The margin for breaking the metal and transport of same is Rs. 3·50 per cube. Allowing Rs. 2 for the latter, there remains Re. 1·50 to be credited to prison labour. Reckoning ten prisoners for breaking each cube of metal, which should cover the intra-prison transport, the result would be 15c. per day for each prisoner, or nearly the cost of his food. Unfortunately, however, the demand is not equal to the power of supply. The Public Works Department use within the gravets of Colombo about 3,000 cubes per annum and the Municipal Council about 1,500 cubes: if all this could be supplied from the jails, work would only be provided for 45,000 prisoners annually, or, say, 150 a day. Probably, therefore, a certain amount of coir-beating to supply prisons, Colonial Store, and outside requirements, might be advisable.

We think fallacious values are often credited to prison labour for work on buildings and other services. In the case of buildings, an estimate of cost should always be made by the Public Works Department, and prisoners should be tasked to do the work at or within the sums estimated. To facilitate this employment of prison labour, encouragement should be given to prison overseers in the way of salary, so as to have attached to all the larger jails one or two men with fair knowledge of masonry and carpentering, and relieving them from night duty.

General.

We are of opinion that Captain Thompson's death affords the Government opportunity for the introduction of a better system of work and discipline throughout the Ceylon jails. Whilst Captain Thompson had the title of Deputy Inspector-General of Prisons, his immediate charge was that of the Convict Establishment, which practically engaged the bulk of his time and kept him in Colombo. In the Assistant Superintendent and head jailors (including the two who have recently arrived, one of whom was Deputy Governor of Richmond jail, Dublin) we believe the Government have at their disposal officers suitable to take the working control of the Colombo jails. These gentlemen would probably require some additional powers granted them, and a moderate increase of salary commensurate with their increased responsibilities. They would be under the constant control of the Inspector-General or his Deputy, one of whom should always be in Colombo. This plan would permit Captain Thompson's successor to give a great deal of his attention to the working of the provincial and outstation jails and of the suggested convict pioneer gang, and also to visit the jails whenever necessary, which, we think, should be done much oftener than has been possible of late years.

F. M. MACKWOOD.
W. R. KYNSEY.
RICHARD A. BOSANQUET.
Signed subject to the appended remarks, G. W. R. CAMPBELL.

Colombo, September 12, 1887.

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* Not printed.

REMARKS BY THE INSPECTOR-GENERAL OF PRISONS.

Colombo, October 4, 1887.

THIS Committee was appointed by His Excellency the Governor, I believe, because there was an opinion prevalent that the Ceylon prisoners are insufficiently worked and too well fed. As this opinion was held by the Hon. F. M. Mackwood, Member of the Legislative Council, he was appointed President of the Committee, and with him were associated Mr. Bosanquet, now Member of the Legislative Council, myself as head of the Prisons and Police Departments, and Dr. Kynsey as head of the Medical Department. The two first gentlemen inspected together several of the prisons, and I placed freely at their disposal for inspection and inquiry, all prisons, books, statistics, prisoners, and prison officers. Owing to an accident which laid me up for several weeks, and to absence on duty from Colombo, I was unable to attend many of the Committee's meetings, or be present at the writing of the report, or at the consideration of the statistics. When Mr. Mackwood had completed the report, he was on the eve of sailing for England. He and the other two members therefore signed and submitted it at once. I was in the interior of the Island at the time, and on my return it was sent by Government to me also for signature. I now return it signed, subject to a very few remarks.

2. First I would say generally, that at an early stage of the inquiry the Committee saw clearly that the outcry about the expensiveness of the convicts' food was baseless, and that the food is as cheap as it can be made. Second, that although the Committee's existence was due mainly to the belief that the cost of the prisons could be greatly reduced, its recommendations if carried out will increase the cost. And, third, that the said recommendations, excellent though most of them are, have already been put into practice as far as funds and local circumstances will admit of. They can undoubtedly be further carried out, but it will cost money.

Para. 16 and general remarks at the end of the Committee's Report.

3. The recommendation, that the police guards, which are at a few of the principal jails, should be superseded by civil guards entirely at the disposal of the Superintendent of the prison, I do not approve of. The police guards, changed from day to day, are less likely to traffic between the convicts and their friends outside, and in case of an *emeute* they, being armed and disciplined, are certain to be of much more use.

4. I approve of the suggestion made towards the end of the report, that the new Superintendent of the Convict Establishment should be made Deputy Inspector-General, but not that he should make a practice of inspecting outstation jails. It would take him too much away from his own important establishment, might produce friction with the Government Agents in charge of jails, and would be expensive. He should be empowered to inspect outstation prisons only when the Head of his Department considered it necessary.

Para. 8 of the report.

5. A few of the Committee's statements put the management of the prisons in rather too unfavourable a light. This could be remedied by a reference to the Prisons Department.

6. Some of the recommendations of the Committee are excellent, such as the increase of stone-breaking, the proper promotion and payment of the guards and providing quarters for them at the jails by prison labour, and the recommendation that convicts may be enabled to earn in the jail a little money to keep them from starving or robbing for a few days after their release. It is to be said, however, that at several jails stone-breaking cannot be provided, and, as regards the proper promotion of guards, that they are all eligible now to rise from the lowest ranks to the position of jailor, which several of them have done.

G. W. R. CAMPBELL.

Appendix I.

A.—Return showing the Work on which the Prisoners in the several Jails in the Island were employed during the Week ended July 9, 1887.

[N.B.—Where the Return is not printed in detail, the figures given show the Daily Average for the Week.]

WELIKADA JAIL.

1.—*Jail Services.*	
Cooks ...	11
Sweepers ...	20
Attendants on sick ...	18
Water party ...	7
Latrine party ...	15
Cleaners ...	17
Clerks, &c. ...	6
2.—*Public Works.*	
Building cells ...	57
Repairs to Jailors' quarters ...	9
Repairs to Assistant Medical Officers' quarters ..	13
Repairs to Officers' quarters ...	12
Road-making ...	12
Blacksmiths ...	7
Carpenters ...	31
Fencing ...	6
3.—*Manufactures.*	
Making brooms ...	6
Mat-makers ...	3
4.—*Miscellaneous.*	
Beating coir ...	47
Coir-twisting ...	72
Medical inspection ...	44
Transfers ...	34
Sick ...	24
Under observation ...	24
Light labour ...	29
Sick and under observation and medical inspection ...	93

Slave Island and Breakwater Jails.

1.—*Jail Services.*

Cooks for two prisons ...	13
Water party	13
Dhobies	7
Cleaners and sweepers ...	10
Hospital orderlies ...	2
Clerks	2
Office constable	1
Store constable ...	1
Ambulance cart	4
Latrine party	9
Pump party	6
Lamp lighter	2
Fumigating cells	1

2.—*Public Works.*

Carting sand	128
Carrying sand	87
Breaking and removing the bridge at the canal ...	13
Breaking metal	1
Levelling sand	7
Repairing jail quarters ...	7

3.—*Miscellaneous.*

Tailor's party	26
Mending clothes	1
Bookbinder	1
Under observation ...	7
Light labour	9

Mahara Jail.

1.—*Jail Services.*

Cooks	8
Sweepers	11
Attendants on sick ...	1
Clerks	2
Dhoby	3
Water party	8
Latrine	5

2.—*Public Works*—Nil

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Breaking stones	123
Cutting stones	14
Miners	14
Artificers	22
Cutting cabook	15
Sledgers	20
Building Medical Officer's quarters	27
Under observation	12
Light labour	6

Hulftsdorp Jail.

1.—*Jail Services.*

Cooks	4
Sweepers	2
Attendants on sick ...	1
Water carriers	4
Dhobies	1
Latrine party	2
Boiling water	1

2.—*Public Works.*

Jail alterations	14
Pulling punkahs	4

3.—*Manufactures*—Nil

4.—*Miscellaneous*—Nil

Simple imprisonment ...	7
Sick	1

Negombo Jail.

1.—*Jail Services.*

Cooks	9
Sweepers	3
Attendant on sick ...	2
Water party	9
Dhobies ...	3
Lamp lighter	1

2.—*Public Works.*

Scavengers	9
Public Works Department ...	10
Local Board	10
Filling up Kamachy-odai ...	4

4.—*Miscellaneous.*

Beating coir	7
Prison constables ...	2
Sick	8
Under observation ...	4
Light labour	17
Convalescents	13

3.—*Manufactures.*

Making baskets	24
Artificers	3

Kalutara Jail.

1.—*Jail Services.*

Cooks	3
Sweepers	2
Orderlies	2
Cleaners	1
Tailors and dhobies ...	2

2.—*Public Works.*

Cleaning District Judge's premises	2
Do. Kachcheri grounds	3
Do. Hospital grounds ...	3
Transporting sea sand ...	8
Cutting holes for night soil ...	4
Latrine and punkah ...	3
Model Farm	13

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Breaking stone	5
Beating coir	5
Twisting rope	4
Simple imprisonment ...	1
Sick	1
Convalescent	1
Light labour	4

Kegalla Jail.

1.—*Jail Services.*

Cooks	1
Water party	1
Latrine	1

2.—*Public Works*—Nil

Government quarters ...	1
Government latrine ...	1
Government grounds ...	2

3.—*Manufactures*—Nil

4.—*Miscelleanous*—Nil

RATNAPURA JAIL.

1.—*Jail Services.*

Cooks	2
Sweepers	1

2.—*Public Works.*

Cleaning Govt. grounds ...	2
Improving Jail buildings ...	10

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Beating coir	3
Breaking stones	2
Simple imprisonment ...	1
Under observation ...	2

AVISÁWÉLLA JAIL.

1.—*Jail Service.*

Sweepers	2

KANDY OLD JAIL.

1.—*Jail Services.*

Cooks	2
Sweepers	4

2.—*Public Works.*

Punkah pullers	2

3.—*Miscellaneous.*

Beating coir	1

BADULLA JAIL.

1.—*Jail Services.*

Cooks	5
Sweepers	1
Attendants on sick ...	1
Water and latrine party ...	5
Nursery	2

2.—*Public Works.*

District Judge's road ...	11
Removing benches, &c. ...	3
Planting ornamental trees ...	7
Clearing jungle ...	2
Metalling roads	8
Experimental garden ..	4
Public tennis court ...	4
Punkah	1

3.—*Manufactures.*

Making windows for Town-hall	5

4.—*Miscellaneous.*

Breaking stones	7
Sitting hard labour ...	6
Light labour	2
Medical inspection ...	3
Simple imprisonment ...	1
Under observation ...	1

MÁTARA JAIL.

1.—*Jail Services.*

Cooks	2
Sweepers	1
Attendants on sick ...	1

2.—*Public Works.*

Water party	4
Scavenging	6
Sledging stones	2
Carting stones	7
Repairing road	13
Carting earth	3
Blasting stones	1
Erecting kitchens ..	3

3.—*Manufactures.*

Making brooms	1
Twisting ropes	1

4.—*Miscellaneous.*

Shot drill	12
Breaking stones	5
Simple imprisonment ...	1
Sick	2
Under observation ...	2
Convalescents	1
Medical inspection ...	1

TANGALLA JAIL.

1.—*Jail Services*

Sweepers	1
Attendants on sick ...	1
Latrine	2

2. *Public Works.*

Building sea wall ...	2
Clearing jungle	11
Scavenging	13
Repairing road	4
Water party	4

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Beating coir	4

HAMBANTOTA.

1.—*Jail Services.*

Cooks	3
Water party ...	4
Sweepers	4
Attendants on sick ...	2
Latrine	1

2.—*Public Works.*

Public latrine ...	3
Carrying water ..	4
Watering plants ..	4
Scavenging	8
Planting sandhill ...	16
Salt store	7
Carpenters	3
Blacksmith	1
Surf boat	1

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Beating coir ...	2
Breaking stone ...	15
Under observation ...	1
Convalescent ...	5
Light labour	1

AMBALANTOTA JAIL.

1.—*Jail Services.*	
Cooks	2
2.—*Public Works*—Nil	
3.—*Manufactures*—Nil	
4.—*Miscellaneous*—Nil	
Breaking stone	17
Sick	1

BALAPITIYA JAIL.

1.—*Jail Services.*	
Sweepers	1
Removing latrines ...	1
2.—*Public Works.*	
Cleaning Government grounds.	4
3.—*Manufactures*—Nil	
4.—*Miscellaneous*—Nil	
Simple imprisonment ...	1

PUTTALAM JAIL.

1.—*Jail Services.*	
Cooks	4
Sweepers	2
Attendants on sick ...	1
Dhobies and tailors ...	1
2.—*Public Works.*	
New Kachchéri building ...	39
Latrine party	4
Clearing and keeping Government grounds in order ...	7
3. *Manufactures.*	
Making brooms for jail use ...	2
4.—*Miscellaneous*—Nil	
Sick	9
Under observation ...	2
Convalescent	2

CHILAW JAIL.

1.—*Jail Services.*	
Cooks	2
Sweepers	2
Attendants on sick ...	1
2.—*Public Works.*	
Scavenging, &c.	6
Carpenter, cleaning the door, &c.	1
3.—*Manufactures*—Nil	
4.—*Miscellaneous*—Nil	
Sick	1

MANNAR JAIL.

[There were no prisoners in Jail during the Week.]

BATTICALOA JAIL.

1.—*Jail Services.*	
Cooks	3
Sweepers	2
Attendants on sick ...	1
Dhoby	1
Clerk	1
2.—*Public Works.*	
Repairing roads	36
Building Small-pox hospital ...	4
Cleaning Government grounds	13
Pulling District Court punkah	1
Building culverts ...	2
3.—*Manufactures*—Nil	
4.—*Miscellaneous.*	
Shot-drill	3
Beating coir	1
Simple imprisonment ...	2
Under observation ...	1

TRINCOMALEE.

1.—*Jail Services.*	
Cooks	2
Sweepers	1
Water-carriers	1
2.—*Public Works.*	
Cleaning latrines	4
Cleaning public esplanade ...	1
Government building ...	4
Cleaning seashore of putrid sea-weed and jelly fish ...	3
Whitewashing Government buildings	1
Partial repair of road to Assistant Government Agent's house	1
3.—*Manufactures*—Nil	
4.—*Miscellaneous*—Nil	
Under observation ...	1

ANURÁDHAPURA JAIL.

1.—*Jail Services.*	
Cooks	3
Sweepers	6
Attendants on sick ...	1
2.—*Public Works.*	
Attending public ground ...	14
Abhagiria restoration ...	25
Filling road	9
Improving pokuna ...	14
Making door frames ...	2
Fence for Government houses	5
3.—*Manufactures*—Nil	
4.—*Miscellaneous*—Nil	
Sick	3
Under observation ...	1

MIHINTALE JAIL.

1.—*Jail Services.*

Cooks	1
Sweepers	1

2.—*Public Works.*

Restoration of dagoba ...	17
Supplying water to hospital ...	

3.—*Manufactures.*—Nil

4.—*Miscellaneous*—Nil

Sick	

VAVUNIYA-VILÁNKULAM JAIL.

1.—*Jail Services.*

Cooks	1½
Sweepers	0½

2.—*Public Works.*

Watering young ornamental plants ...	8

3.—*Manufactures*—Nil

4.—*Miscellaneous*—Nil

JAFFNA JAIL.

1.—*Jail Services*

Cooks	8
Sweepers	5
Attendants on sick ..	1
Storekeeper and lamplighter	1
Dhoby	1
Tailor	1
Water party	4

2.—*Public Works.*

Kachchéri gang	10
" artificers ...	36
" labourers ...	35
Police building	55
Friend in Need Society hospital	7
Quarrying stones ...	10
Transporting stones ...	24
Kalmunai for sand ...	8
Planting trees	6
Breakwater	10
Punkah, District Court ...	1
Burning lime	9
Salt-pan	8

3.—*Manufactures*—Nil

4.—*Miscellaneous.*

Shot drill	4
Breaking stone	6
Simple imprisonment ...	1
Sick	6
Light labour	3
Under observation ...	7

GALLE JAIL.

1.—*Jail Services.*

Cooks	7
Sweepers	2
Attendants on sick ...	1
Scavengers	7
Water party ...	9
Tailor	1
Dhobies	2

2.—*Public Works*

Pulling punkah .	1
Fiscal's office with books ...	2
Repairing Municipal roads ...	24
Repairing buildings at Kachchéri	9

3.—*Manufactures.*

Making tatties, &c. ...	1
Blacksmiths repairing jumpers	1

4.—*Miscellaneous.*

Beating husks ...	2
Twisting coir ...	4
Breaking stones ...	56
Miners	10
Medical inspection, &c ...	5
Sick	5
Under observation ...	1
Convalescents ...	1
Light labour ...	13

BOGAMBARA JAIL.

DETAIL OF WORK.	NUMBER EMPLOYED.						
	Sunday, July 3.	Monday, July 4	Tuesday, July 5	Wednesday, July 6	Thursday July 7	Friday, July 8	Saturday, July 9 (up to Lock-up)
1.—*Jail Services.*							
Cooks	8	8	8	8	8	8	8
Sweepers	11	11	11	11	11	11	11
Attendants on sick	2	2	2	2	2	2	2
Latrine cleaners	10	10	10	10	10	10	10
Water carriers...	6	6	6	6	6	6	6
Tailors	—	2	2	2	2	2	2
Dhobies	—	3	3	3	3	3	3
Prison clerk	1	1	1	1	1	1	1
Lamp lighters	1	1	1	1	1	1	1
2.—*Public Works.*							
Pavilion	—	12	12	12	12	12	12
Government Agent	—	10	10	10	10	10	10
Kachchéri	—	10	10	10	10	10	10
Municipal Council lake	—	50	50	50	50	50	50
Municipal Council recreation ground ...	—	50	50	50	50	50	50
Roading Government Civil Hospital ...	—	20	—	—	—	—	—
Roading Cemetery	—	20	—	—	—	—	—
Jail Hospital (new)	—	20	—	—	—	25	30
Jubilee works	—	20	12	—	—	—	—
Fiscal's Office	—	—	—	—	—	—	6
Colonial Secretary's Lodge	—	—	—	—	—	10	—
3.—*Manufactures*							
Making baskets	—	1	1	1	1	1	1
Blacksmith	—	2	2	2	2	2	2
Tinsmiths	—	2	2	2	2	2	2
Carpenters	—	3	3	3	3	3	3
4.—*Miscellaneous.*							
Shot-drill	—	14	20	27	25	20	22
Beating coir	—	—	—	—	—	—	—
Breaking stone	—	15	60	82	78	43	46
Miner	—	—	12	12	12	12	12
Carting and piling stone and metal ...	—	12	22	22	30	30	30
Medical inspection and jobwork ...	1	5	16	11	8	12	16
Unemployed, being Sunday	256	—	—	—	—	—	—
	296	296	306	311	312	316	324
Simple imprisonment	2	2	2	2	2	2	2
Sick	4	5	4	5	6	7	7
Uunder observation	6	3	2	2	3	1	—
Light labour	11	12	15	11	11	11	13
Convalescent	6	6	5	5	5	5	2
Total convicted prisons	325	324	334	336	339	342	348

NUWARA ELIYA.

1.—*Jail Services.*							
Cooks	2	2	2	2	2	2	2
Sweepers	3	3	3	3	3	3	3
Attendants on sick	—	—	—	—	—	—	—
2.—*Public Works.*							
Queen's Cottage	—	7	6	7	7	9	10
Government grounds	—	4	4	9	9	11	10
Local Board	—	25	26	26	20	21	22
Firewood	—	4	5	5	5	5	7
3.—*Manufactures.*							
Making brooms	—	—	—	—	—	—	—
Making baskets	—	—	—	—	—	—	—
4.—*Miscellaneous.*							
Shot-drill	—	—	—	—	—	—	-
Beating coir	—	—	—	—	—	—	—
Breaking stone	—	—	—	—	—	—	—
Light labour	6	4	4	5	5	3	3
Simple imprisonment	—	—	—	—	—	—	—
Sick	—	—	—	—	—	4	4
Under observation	2	6	6	1	7	2	1
Unemployed	42	—	—	—	—	—	—
Total convicted prisoners ...	55	55	56	58	58	60	62

MÁTALÉ JAIL.

Detail of Work.	Number Employed.						
	Sunday, July 3.	Monday, July 4	Tuesday, July 5	Wednesday, July 6	Thursday July 7	Friday, July 8	Saturday, July 9 (up to Lock-up)
1.—*Jail Services*—Nil							
2.—*Public Works.*							
Clearing and weeding District Engineer's premises	—	16	16	12	2	2	8
3—*Manufactures*—Nil							
4—*Miscellaneous.*							
Beating coir	—	2	2	3	1	1	1
Breaking stone ...	—	—	—	4	4	4	5
Sick	2	2	2	2	2	2	1
Total convicted prisoners ...	2	20	20	21	15	15	15

KURUNÉGALA JAIL.

1.—*Jail Services*							
Cooks	5	5	5	5	5	5	5
Sweepers	1	2	2	2	2	2	2
Attendants on sick	2	2	2	2	2	2	2
Dhobies	—	1	1	1	1	1	1
Tailors	—	1	1	1	1	1	1
Water party	4	4	4	4	4	4	4
2.—*Public Works.*							
Jail and Public latrines	12	12	12	12	12	12	12
Tank Work ...	—	20	21	18	20	20	20
Cutting fence sticks	—	16	13	9	8	7	8
Maligawa grounds	—	11	10	10	10	11	12
Esplanade	—	—	—	—	—	—	—
Removing sand	—	10	10	10	—	—	8
Removing stones	—	10	11	11	16	11	11
District Court punkah ...	—	1	1	1	1	1	1
Government grounds	—	17	12	19	33	26	17
3—*Manufactures.*							
Making brooms	—	—	—	—	—	—	—
Making baskets	—	2	2	2	3	—	—
Carpenters	—	3	3	3	3	3	3
Blacksmiths	—	2	2	2	2	2	2
Masons	—	2	2	2	2	2	2
4.—*Miscellaneous.*							
Shot-drill	—	—	—	—	—	—	—
Beating coir	—	—	—	—	—	—	—
Breaking stones	—	110	116	116	111	121	123
Unemployed	204	—	—	—	—	—	—
	228	231	230	230	236	221	234
Simple imprisonment	—	—	—	—	—	—	—
Sick	13	9	9	10	8	8	9
Convalescents	4	2	4	4	2	2	2
Under observation	2	2	2	1	—	3	—
Light labour	14	15	16	16	16	16	17
Total Convicted Prisoners ...	261	259	261	261	262	260	262

B.—Paper by Captain Thompson for employment of Prisoners, re Intra-mural Stone-breaking.

WITH the prospect of the final completion, so far as prison labour is concerned, of the Breakwater Works at no distant date, and the consequent evacuation of the present Breakwater Prison, in view also of the possible closing of the Slave Island Prison, or its conversion into a jail for military offenders, I would suggest the advisability of building a jail in the near neighbourhood of Colombo for the accommodation of the class of convicts hitherto employed on the Breakwater Works.

2. I would strongly urge that the labour of this prison should be entirely intra-mural, and with this view I would recommend that land from which, if possible, both stone and cabook are procurable be taken over for the purpose.

3. The cost of building such a prison as that I propose need not be considerable, nor need it be immediate, as I should build the jail gradually.

4. In the first place, I would build the enclosing wall with stone or cabook, quarried on the spot, the building and quarrying to be all done by convict labour supplied by working parties drafted daily from whichever of the Colombo jails is nearest the site chosen.

5. On the completion of the surrounding wall, temporary cadjan wards should be at once put up within, and prisoners housed in them, who would go on with the erection of proper cellular blocks, the stone for which to be quarried as before on the spot.

6. I should have a hospital within the walls of the prison, and all the sick prisoners would be treated on the spot.

7. Whilst the building is progressing and after its completion, I should employ all convicts not quarrying or building, in stone-breaking for the Public Works Department, Municipality, and other Departments, so that as soon as the surrounding wall is completed, the jail would begin to pay for itself.

8. Eventually, when the buildings are completed, the prisoners in this jail would be principally employed in stone-breaking.

9. The great object gained by having a jail such as this, with the work inside and the hospital inside, will be that for no purpose whatever will a convict, when he has once passed the gates inwards, pass them again outward, until either—

(*a*) his sentence expires;
(*b*) he dies;
(*c*) he is pardoned;
(*d*) he is discharged on ticket-of-leave; or
(*e*) he is draughted off when near the end of his sentence, and on account of long-continued good conduct, to be employed for the short remainder of his term, as a prison constable or artizan, in an outstation jail.

I have in my Administration Reports pointed out the importance of the establishment of a prison of this sort, where the labour will be really penal, whose occupants will never be seen by the outside public, and the very name of which will be a terror to evil-doers. Another important advantage of this scheme would be that, having all the convicts working in a comparatively small space inside the walls, fewer officers would be required than at present, and thus, by being able to give higher pay, a better class of officers could be secured than at present.

10. It must be remembered that in a jail of this description, so long as hard work can be found for the convicts within the walls, increase in number means increase in economy as regards the staff, and, what is of vastly greater importance—the enforcement of proper discipline and real hard labour on a larger proportion of the prison population of the Island.

My conviction after an experience of twelve years is, that with regard to our Prison System any failure there has been in deterrent effects, in discipline, in economy, and other important points, is the result of our having too many small jails.

C.—Dynamic Value of Work.

The standard is the foot ton, or the amount of effort necessary for raising one ton one foot in height.
150 tons is the amount necessary to maintain an adult *European* in health.
300 foot tons represent an average day's work
400 foot tons a hard day's work.
500 foot tons a very hard day's work.
The average weight of an European 150 lb.
The average weight of a native 105 „

To convert the average day's work of an European into the average day's work for a native,

$$150 : 105 :: 300 . x = 210 \text{ foot tons}$$

Dr. Haughton's formula for calculating the dynamic value of work in foot-tons or lb.,

$$\frac{(W + Wt) \times D}{20 \times 2{,}240}$$

W = weight of person.
Wt. = the weight carried.
D = the distance walked in feet.
20 = Co-efficient of traction.
2,240 = number of pounds in a ton.

A man weighing 105 lb. and carrying 10 lb., walking on a level does work equal to lifting 13·55 tons one foot for each mile walked.

(105 + 10) × 5,280 ÷ 20 = 30,360 foot pounds = 13·553 foot tons. 210 the average day's work of a native, ÷ 13·55 = 15·50. Hence a man weighing 105 lb. and carrying 10 lb., walking on the level for 15·50 miles does work equal to raising 210 tons one foot.

Walking on the level without a load is equivalent to raising 1-20th the weight through the distance walked 1-20th the weight of a native = a little over 5 lb., so that a mile walked represents 11·8 foot tons.

D.—Return called for in regard to Coir Manufacture in the Węlikaḍa Prison.

Husk supplied by Contractor in 1886.	No. of Prisoners employed at Husk-beating.		Value of Goods manufactured and disposed of.			
	Total.	Daily Average.	Colonial Store.	Other Customers.	Jail uses.	Value of Fibre and Yarn.
			Rs. c.	Rs. c.	cwt. qr. lb.	Rs. c.
1,152 cwt. @ 25c. per cwt.= Rs. 288 00.	31,611	101·6	324 32	185 31	16 2 23= Rs. 150·57	660 20

Appendix II.

Evidence given by Mr. Assistant Superintendent Mooney.

Has been connected with prisons for eleven years in Kandy and Hambanṭota as well as in Colombo. The jailor compares the number of diets issued with the number of prisoners. Prisoners on entering Węlikaḍa have no stone breaking, nor have Europeans ever done that work in this jail, unless when sent back to the penal course as a punishment. On entering jail prisoners formerly did shot-drill, but this was discontinued about five years ago on the advice of the prison doctors. Formerly prisoners at Breakwater, Mahara, and Slave Island did really heavy work, including stone-breaking, on their full diet. Full diet was recommended in Mahara by the doctors on January 3, 1877. The prisoners themselves had made no complaint. At Slave Island and Breakwater there is now no stone breaking.

By rule 192 (Prison Manual) penal stage prisoners are not permitted to work outside the jail. Węlikaḍa, however, has to feed Breakwater and Mahara, and to do this penal stage prisoners have to be transferred to these jails, as many of the prisoners in the other stages are unfit for hard work.

This rule has frequently to be broken in order to meet the demand of the Public Works Department for convict labour. Prisoners have sometimes worked outside the jail during the *first week* of confinement.

Stone costs Rs. 4·50 per cube to put down at Węlikaḍa. Eight men will break one cube (one cube = 66 bushels), per diem, which then sells for Rs. 7. Mat-making gives a profit per man of about 30 cents a day; coir-beating gives less. Stone breaking has never been practically tried at Węlikaḍa, but is now being tried in Mahara. Shot-drill is not carried out because the prisoners are not strong enough.

The shot in use for adults weighs 24 lb. The prisoners are too weak in the loins to handle so heavy a weight. For this reason the stands were made higher, which destroyed the value of the drill. The shot should weigh 14 lb., and the stands should not be more than four inches clear of the ground.

The penal stage used to last six months, with penal diet only twice a week. Shot-drill was given for that period. Afterwards the penal stage lasted for three months.

For the first two months penal diet was, and is now, given every day, and ordinary diet for the third month. Shot-drill was given for three months. Shot-drill is too hard (see Administration Report of 1884). The physique of prisoners *entering Węlikaḍa* has greatly deteriorated in the last four years.

Soldiers and Europeans don't get enough work, and get into hospital too easily. Soldier overseers are inclined to be 'down on' military prisoners. European prisoners get two hours walking, 7 to 8 A.M. and 4 to 5 P.M. Tobacco is sometimes conveyed to them by the warders.

Europeans should do stone breaking in separate cells with partitions four feet high. At present prisoners talk freely to each other.

Solitary confinement has not been tried. It would be a severe punishment for natives. Natives would dislike punishments which render them ridiculous, more than solitary confinement. They hate cuts with the rattan. Mr. Mooney would like to see some variety in the forms of corporal punishment. Coir-beating is the hardest work at present.

Prisoners leave the canal at 4 P.M., and are locked up in Slave Island by 5 o'clock. The question of working later has not been raised. Prisoners might work an hour longer. The evening meal takes 20 minutes.

Coir work does not pay.

Prisoners do not *now* complain of the food. Formerly there were complaints as to the quantity of rice. Military prisoners sometimes leave rice at the midday meal.

Europeans could do stone-breaking on present diet.

Speaking from memory, the largest percentage of prisoners in hospital comes from penal stage men.

About forty men are required for odd jobs outside the jail—this work is done by second stage, but not by penal stage prisoners. Twelve men a day are required for burying latrines.

Warders are constantly shifting; consequently there is no drill for them. There is now a hospital for warders. Fewer warders would be required if all prisoners worked in the jail and in solitary confinement.

At the time of Dr. Coghill's report three or five men were sometimes in one cell.

450 adult and juvenile male prisoners could be kept in Węlikaḍa (382 cells at present, 60 new cells, 8 female cells). In future there will be no association ward. Under the present system all the warders are required for the work. Prison constables are very trustworthy. The Rs 25 warder is much superior to his brethren at Rs. 15 per mensem.

Light industrial labour. No check on quantity done by each man per diem.

Building (by prisoners). Material (bricks, lime, &c.) provided by the Public Works Department, who calculate quantity. There is no estimate of cost or of number of men required. The men do not do an allotted task. The overseer is trusted.

The value of such work is calculated by putting each man at 37½ cents, whether he is trained or not. When the Breakwater was being built prisoners worked better than the ordinary labourers.

Prisoners filling up canal are not paid for, but the guards are. Public Works Department state to Government what they have saved by prison labour. The Public Works Department do not exact any tasked amount of work. Mr Kyle required 2 cubic yards of earth per man.

Levelling Galle Face. No task. Overseers: 2 at Rs. 50 and 3 others.

24 men took three months to whitewash Civil Hospital. Work delayed for six weeks for lack of lime.

Second-stage men do not leave the jail in England.

In Ireland prisoners work for nine months on probation, after which they are put to build fortifications on Spike Island, being isolated altogether. The nine months could formerly be abridged by good workmen.

One paid clerk (Rs. 50) at Węlikaḍa.

Men generally stay seven to ten days in invalid gang. Negombo and Kalutara are invalid jails. These men twist yarn, clean yards, pluck fibre, &c.

Appendix III.

Replies to Circular from the Chairman of the Prisons Committee.

A.—From the Hon. R. W. D. Moir, Acting Auditor-General.

Audit Office,
Colombo, August 31, 1887.

SIR,—ADVERTING to my letter of the 24th instant, I have now the honour to enclose a memorandum setting forth my views on those points relating to Ceylon Prisons referred to in your letter of the 20th *idem*.

I am, &c.,
R. W. D. MOIR.

SUFFICIENCY OF WORK.

THIS point cannot be easily dissociated from the two which follow. So long as the quantity and quality of food are what are at present allowed, and the discipline is as lax as, generally speaking, it now is, it would be difficult to devise work that would prove sufficient in the sense of being sufficient to deter from the commission of crimes or offences. There is no station, I believe, where there is a large jail, where all the metal that could be broken would not be readily made use of. I would keep all the convicts at stone breaking within the prison walls, requiring a daily task from each man. Industrial hard labour, accompanied by dieting on the present scale, has, in my opinion, no deterrent effect in this country. Quarrying (as carried out at Mahara) and stone breaking, coupled with less luxurious feeding, might with advantage be more universally employed than at present.

QUANTITY AND QUALITY OF FOOD.

Most convicts receive more and better food when in jail than they have in their own homes. The prison ration should certainly be plainer, and I think less in quantity.

JAIL DISCIPLINE.

The discipline maintained in regard to our prisoners is much too lax; with association wards and work beyond the precincts of the jail, it is difficult to preserve sufficiently strict discipline. Complete silence should be insisted upon, but how can that be done when the men are worked outside the jail? The practice of sending prisoners to work outside the prison walls is a very pernicious one, and wholly subversive of discipline. To maintain discipline the men should be kept as much as possible within the jail during the whole term of their imprisonment, and association wards should be done away with as far as practicable. Shot-drill, which is now part of the ordinary routine of a convict's employment during a considerable part of his imprisonment, should, I think, be made a punishment only, and should be so conducted as to be real punishment. The stands used should not be higher than 1 or 1½ ft. from the ground, and the drill would be then found to be more than hard labour. As labour it is profit less waste of time.

QUESTION OF WORKING PRISONERS INSIDE OR OUTSIDE THE JAILS.

As already stated, I consider that working prisoners outside jails has a very bad effect. Not only is the discipline of the jail interfered with; but the facts, which are apparent, that the convicts are excellently well fed, that they have exceedingly light work, and that they are quite as cheerful and happy as if they were free (evidenced by their chattering and laughing to their heart's content), must have the reverse of a deterrent influence on the labouring population who are living from hand to mouth, and who find that they cannot take things as easy as the convicts in the working parties do. Except perhaps in Colombo, it it not very difficult for convicts to escape from working parties; therefore, to prevent the risk of trouble, the guards humour the men who, consequently, do but little work, and have opportunities in indulging in the luxury of chewing tobacco, &c. There are some stations probably where it is difficult to do away, altogether, with the employment of prisoners outside the jail; but I should limit such employment to services directly connected with the prison, or to clearing latrines and the like, and as far as possible, I should send beyond the walls only men who were in custody on short sentences.

R. W. D. MOIR.

B.—From the Hon. F. R. Saunders, C.M.G., Government Agent, Western Province.

No. 1,290.

Government Agent's Office,
Colombo, August 25, 1887.

SIR,—I HAVE the honour to acknowledge receipt of your letter of August 20, and to state that the questions on which you ask for my opinion are very large and important, and to discuss them fully, even as general questions, would require more time than I can spare in the short interval you have allowed for my reply to reach you. Moreover, to discuss them properly in relation to Ceylon Prisons, would require a knowledge of the present working of Ceylon jails, which I do not now possess.

2. When I was Inspector-General of Prisons from 1872 to 1876, I wrote several papers on these subjects for the information of the Governor and of the Secretary of State, and to these I would refer you for any full and lengthy discussion of the several matters indicated by you.

3. Having said this much, I have now the honour to state briefly my opinions on the points submitted to me.

SUFFICIENCY OF WORK.

I consider that the Manual of Jail Rules, which was compiled by me after careful consideration of English, Indian, and Colonial systems of prison discipline, provides rules under chapter XV. "as to labour of convicted prisoners" (see edition of 1879) for the proper and sufficient working of prisoners, but much of course depends on the description of hard labour exacted. Eight to nine and a half hours of "such hard labour as may be ordered" (see rule 186) will give *sufficient* work to any prisoner, if the work were really hard—that is to say, rigorously hard labour. In the penal stage, shot-drill, stone-breaking, and coir beating should be rigorously enforced.

4. When it is remembered that nearly 90 per cent. of our prisoners are sent to jail for terms under three months, and nearly 70 per cent. for under one month, it will be seen how very necessary it is that the penal stage should be made absolutely deterrent. Not only should a prisoner's labour in the penal stage be rigorously hard, but rule 192 should be strictly enforced: "His labour should be entirely within the walls of the jail." On no consideration whatever should he be allowed out to sweep gardens, to explore for ruins, to draw water, or to scavenge streets, &c.

I find that in my Administration Report for 1875 I wrote as follows:—

"Profits from prison labour have also generally increased, and I feel sure that if the several Fiscals would only give their attention to the subject, and introduce at each jail, with the sanction of the Inspector-General of Prisons, some hard remunerative labour most suitable for that particular jail, the profits from prison labour would be much larger. At almost every jail stone-breaking or coir-beating might be made to pay, but it must be done systematically, or it will be done at a loss. There is a great temptation to employ prisoners as scavengers, &c., but this ought to be discouraged; it is contrary to the first principles of prison discipline.

"I still have great faith in a penal stage and shot-drill for short-sentenced prisoners, but I would shorten the term for long-sentenced men. One month in the penal stage would be quite long enough to train a man to prison

duties, and I would then send him out to begin his long term of labour on the public works. In India long-sentenced men do not go through the penal stage at all.

"The necessity for a different treatment between long and short-sentenced prisoners has been so fully discussed before, that I need not here enter upon it."

As regards long-sentenced prisoners, I am strongly of opinion that industrial *hard* labour should be insisted upon, and that if there is no industrial hard work to be found within the walls, that they should be worked in large gangs at public works such as the Breakwater, the Mahara quarry, and other large public works, but not on such works as scavenging streets, or looking after public grounds, sweeping compounds, and such like. These works should be reserved for industrial light labour men.

QUANTITY AND QUALITY OF FOOD.

5. The present diet tables were framed by Dr. Kynsey and me in 1875, and are, I think, ample. Full diet was intended for prisoners on specially hard work, and might perhaps be discontinued as a general diet for long-sentenced prisoners who have completed a year's imprisonment, and be only given by especial authority when very heavy work was being carried on.

The penal diet is not excessive, and could not be less without risk to health (even for the short term of one month) if rigorously hard labour is to be exacted

JAIL DISCIPLINE.

6. So far as I can judge from hasty visits made to the jails in the Western Province, and from observing prisoners at work outside our jails, I am inclined to think that jail discipline has been very much relaxed of late years.

Prison discipline according to the separate (not solitary) system is thoroughly well understood, and the Manual of Rules provides for carrying it out, but to be effective it must be strictly observed · and the Inspector-General should give the most positive orders, and use the utmost vigilance, to oblige superintendents of outstation jails to work it as a system, and not to permit it to be relaxed on every possible pretext.

(4) QUESTION OF WORKING PRISONERS INSIDE OR OUTSIDE THE JAILS.

If industrial hard labour could be found for the prisoners inside the walls, there can be no doubt that such is the proper mode of working sentences of imprisonment the discipline can be made more strict and effective, the separate system can be carried out more easily, and the punishment can be made more severe If, however, financial considerations make it necessary to employ prisoners outside the jails, they should only be employed on such works where they can be kept quite apart from, and if possible out of sight of, free labour. The Mahara quarry the Breakwater Works, and salt-collecting are good in this respect The most complete silence, the strictest discipline, should be enforced, and all work near to free labour should be avoided, and work with free labour absolutely prohibited, except for ticket-of-leave men.

I would in any case keep all prisoners convicted more than twice at hard labour within walls, and never allow them outside until they were in the third stage.

I am, &c.,

F. R. SAUNDERS,
Government Agent.

C. From the Hon G S Williams, Principal Collector of Customs.

Colombo, August 24, 1887.

SIR,—IN answer to your letter of the 20th instant, I have the honour to enclose a statement of my views on the various points with regard to the Ceylon Prisons, on which my opinion is requested.

2. It is more than a year since I have been in charge of a prison, and I have not time to refer to statistics. My views must therefore necessarily be based upon personal recollection, and may be in some cases unsupported by the figures with which the Prison Commission is no doubt provided.

3. The only prisons as to which I can speak with confidence are those at Hambantota and Kurunégala, but the former is a good instance of a really penal station, and the latter affords an example of an ordinary prison.

4. In speaking of prison diet, it must be understood that I only deal with generalities. I cannot go into the question of particular diets suitable to certain localities I have little doubt that convicts from some districts at the time of their first admission into jail require treatment different from that which would be suitable to men from other parts of the Colony. The inhabitant of some of the fever-stricken villages of Kurunégala differs widely from the thief of Colombo. But my opinion as to the *general* character of the present dietary is strong, and I think that the question of making prisons places of abode more to be feared than they are at present is an important one.

5. I regret that the time at my disposal was been insufficient to allow of more than the barest statement of my views, very hastily and imperfectly expressed.

I am, &c.,

G. S. WILLIAMS.

SUFFICIENCY OF WORK.

At Hambantota there was, and can always be found, plenty of work of a laborious and irksome nature. The collection of salt during the salt harvest, and the storing and issuing of it from store during the months when no collection is going on, as well as the various works incidental to the Salt Establishment, afford every year sufficient hard labour for some of the prisoners Besides this work, there is planting of the sand-hills, involving exposure to the sun under conditions which certainly render the labour hard when properly supervised. Energetic supervision is of course indispensable Without it prisoners may idle on a saltpan, or a sandhill, as well as anywhere else. And at Hambantota work might be found for a much greater number of men than the present jail will hold. A salt crop could be obtained from the Maha Lewaya every year by operations similar to those carried on by the owners of saltpans at Puttalam—probably two crops, and employment could thus be found for a large number of prisoners; and the same thing might be done at Puttalam if consistent with the policy of the Government. My opinion is, that *on the whole* the prisoners at Hambantota *are* sufficiently worked, and that work could be provided for more, while at the same time that work could be hard and irksome in its nature and very profitable to the Government.

At Kurunégala those prisoners who are employed at breaking stones and clearing the tank have sufficiency of work, but it is questionable whether the work provided for those employed in clearing and cleaning public grounds is hard enough for able-bodied men. This work is necessary, but it is not hard labour, and when there is not in the prison a sufficient number of persons properly subject to light labour only, able-bodied men have a very easy time of it.

I think Kurunégala may be taken as fairly representing one of the ordinary prisons of the Colony, and that what is true of it is true generally.

QUANTITY AND QUALITY OF FOOD.

Prisoners get plenty of food, and I have never had occasion to find fault with its quality. That it is exactly the right kind of food, I am not certain. Curries so hot that few Europeans could eat a spoonful, twice a day, are the regular diet. Sore mouth is frequent, and is cured by a milk diet for a few days I think this shows that a simpler regimen, always providing sufficient nourishment, would be better for the prisoners themselves. Possibly there is too much salt fish, and generally speaking, considering the quantity of cocoanut, Maldive fish, and "curry stuffs," and highly spiced broths, which are freely added to the rice, I should say that though all the ingredients are of excellent quality, the result may be, and probably is, a very *rich* food, which any doctor would forbid in the case of an European who showed symptoms of sore mouth—would interdict, I mean not temporarily, but entirely. Where real hard work is exacted, meat I suppose is necessary, but I would give as little *salt* fish as possible, perhaps *none* would be best Prisoners become exceedingly dainty after being some time in jail, and I have known them complain of the want of "flavour" in the broths (always of two sorts) poured over their curry and rice. In fact, they like highly seasoned and unwholesome food, and they know they will get rest from labour and other more wholesome delicacies in case their stomachs show signs of revolt. If I am right in believing that there is a good deal of this alternation between the enjoyments of a gourmand, and the carefully tended and delicately fed case of an invalid in our prisons, a change is desirable.

JAIL DISCIPLINE.

This, I think, is pretty fair within the walls, but generally lax outside. It is a question of money. Wages less than those of a horsekeeper will not secure fidelity and courage. So long as a cent or two is a sum not to be despised by a guard, discipline in places where the jailor can only occasionally (and that probably not without notice) be present, will be wanting Inside the jails association wards render the maintenance of proper discipline difficult It is unnecessary to say much on this subject, I hope that the time is not far distant when there will be no association wards in Ceylon.

QUESTION OF WORKING THE PRISONERS INSIDE OR OUTSIDE THE JAILS.

is intimately connected with discipline. At Mahara quarry, on the Breakwater, and on the saltpans at Hambantota, it is easy to keep prisoners and free men apart, and in such places strict discipline and hard and profitable labour can be enforced. But when convicts are set to work in the public streets, sometimes in the most crowded thoroughfares, as when the wall round the Racquet Court was built, strict discipline cannot be expected.

As regards the health of the prisoners themselves, there can be no question that, if hard labour is really exacted, employment outside the jails is preferable But, believing as I do that for men convicted of serious crime separate cells are necessary, I cannot recommend the employment of prisoners on extra mural works in large numbers, except within a short distance of jails possessing a sufficient number of cells to accommodate the men so employed As it seems to have been decided that such industries as those of carpentering, shoemaking, and weaving shall not find a place in our jails, there is little left but cocoanut beating and stone-breaking. These, where the space enclosed by the walls is large enough to afford the requisite amount of ventilation, which in Ceylon should be very large, can be carried on in such a manner as not to interfere with the health of the prisoners, and can be easily supervised. The same remark applies to the work at depôts of timber. As a general rule, I should say, when it can be done without detriment to discipline, prisoners are better employed outside the walls of the jails, but to send out scattered parties in charge of underpaid guards, to be visited by even the strictest of jailors, is a practice to be condemned. Where this cannot be avoided, "light labour" men and convicts near the end of their term of imprisonment should be employed If no prisoners are to be employed outside the jails, trade industries must be re introduced, and the natural suggestion arises, that everything requisite for the prisons should be manufactured by prison labour.

Colombo, August 24, 1887. G. S WILLIAMS.

Appendix IV.

Memorandum by E. ELLIOTT, Esq., Acting Government Agent, Southern Province, on "Ticket-of-Leave, or Intermediate Imprisonment?"

I CANNOT concur in the proposal to release well-conducted prisons on "tickets of-leave," as suggested in the papers recently submitted to the Government Agents, to be employed on public works. Official *good conduct in jail* is, in my experience, very little guarantee for good conduct on release; I would rather look to a man's character before conviction, to judge how he is likely to behave when free or comparatively free.

2 But I do think we might have a Convict Pioneer Corps to be employed on public works at a distance from prisons. Such a corps might be lodged in ordinary lines, and would not require any armed force to overawe it or prevent escapes. The corps should be under the immediate charge of a judicious officer accustomed to work prisoners (such as Mr. Perera or Mahet jailers in the Prison Department), and a few paid overseers It should be visited at least *once a week* (the more frequently the better) by a European Government servant, such as an Assistant Agent, District Engineer, &c, to be called the Superintendent.

3. The *reward to the prisoner* should take the shape of additional marks for remission and a *small* money wage (varying from 12½ cents for an artisan down to 5 cents a day for ordinary labour) *payable on discharge*. Rations should be issued free and also betel, but no liquor permitted There should be a distinctive dress, but not the same as in the prisons.

4. The Superintendent's power should be limited to disallowance of marks and pay (within certain limits) and removal back to prison, subject to approval of Inspector-General of Prisons, leaving serious offences such as assault, &c., to be dealt with by Visitors or the ordinary courts

5 The *discipline* would be what I would call military rather than penal. That is, there should be certain roll calls, no absence by day or night without special permission, and the men should always be under the eye of a paid free officer.

6. Prisoners with terminable sentences of five years and over, who had earned *half marks*, should be eligible for appointment to these corps, provided their conduct in jail was good and their antecedents before *conviction* were not such as to negative the probability of good conduct under the less stringent conditions which must necessarily prevail. Care should also be taken not to send men to their own districts,—*e.g.*, those of the Southern Province to Walawe works.

August 26, 1887. E. ELLIOTT.

Appendix V.

Scheme by Captain Thompson for a system of Intermediate Imprisonment and "Ticket-of-Leave" Stage.

[Not printed.]

Appendix VI.

The Hon. the Colonial Secretary to the Chairman of the Prison Diet Committee.

Colonial Secretary's Office,
Colombo, July 5, 1887.

SIR,—I AM directed to transmit to you as Chairman of the Prison Diet Committee the annexed extract from a letter from the Major General Commanding, on the treatment of military prisoners in the Wełikada Jail, together with the scale of diets issued to military prisoners in the said jail, and other extracts bearing on the subject; and I am to request you to favour me with the opinion of your Committee on the matter at your early convenience.

2. The Major General has been requested to allow the Military Medical Officers to assist you with their advice.

I am, &c.,
A. M ASHMORE,
for Colonial Secretary.

Extract referred to.

"The prisoners in Provost cells are employed in stone breaking. The supply of stone has been obtained from the Municipal Council for many years past, at all events from 1879. Possibly a similar arrangement might be made for the prisoners confined at Wełikada. If, however, the prisoners were given hard labour, some alteration in the present scale of diet would probably be necessary, as the Senior Medical Officer considers it deficient in nitrogenous elements. The quantity of meat, should, he thinks, be increased, or a substitute added such as peas or cheese."

A.—Memorandum by Dr. W R. Kynsey, Principal Civil Medical Officer.

I APPEND a scale of diets issued to military offenders in the Wełikada Jail.

I have compared this with the scale furnished to me by Major Ferguson, showing the diets issued to prisoners in Garrison Cells, Colombo, and I find the latter to be in my opinion more substantial as well as more costly.

In the garrison cells the prisoners get double the quantity of meat allowed at Wełikada, viz., 8 oz. as against 4 oz., 8 oz. of rice as against 4 oz., 1½ oz. of coffee as against ½ oz. of tea. At Wełikada the prisoners get 4 oz. of bread more than in the garrison cells, and 10 oz. of plantains. There is no other material difference.

Rations issued to Military Prisoners.

Articles	In Wełikada oz	In Garrison Cells oz.
Bread	20	16
Rice	4	8
Meat	—	8
Meat or fish	4	—
Vegetables	4	—
Plantains	4	—
Sugar	2	1
Tea	½	—
Cocoanut	2	—
Onions	½	—
Salt and pepper	½	—
Curry condiments	A sufficient quantity	1
Coffee	—	1½
Vegetables, salt, and pepper for soup	—	A sufficient quantity

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Dietaries of European Soldier Prisoners in Ceylon.

I.—PRISONERS AT WEŁIKADA.

	oz.	
Albuminates	3·01	Containing 203·5 grs. nitrogen and 4,366 grs. carbon.
Carbo hydrates	17·54	
Fats	·69	

But 2 oz. cocoanut has not been calculated, when it is, quantity of fat will be much increased and sufficient.

II.—PRISONERS IN GARRISON CELLS.

	oz.	
Albuminates	3·07	Containing 206 grs. nitrogen and 4,140 grs. carbon.
Carbo hydrates	15·78	
Fat	·96	

In both the Wełikada and Garrison Cell diets there is a deficiency of albuminates, and consequently of nitrogen. When the quantity of fat in the 2 oz. cocoanut, which contains fat or oil in large quantity, allowed to the Wełikada men, is inserted, the quantity of fat in this diet will be sufficient, and, besides, the increased quantity of carbo-hydrates would more than supply any deficiency in this element, the carbo hydrates and fats being, it is believed, convertible. The quantity of fat in the garrison diet is too small, and there is not sufficient carbo-hydrates to make up for the deficiency.

Both diets would keep men doing nothing in good health, and would probably keep men so if the labour is not excessive, and I do not think it is so at Wełikada or the Garrison Cells. If the men are to be worked harder, it

will be necessary to increase the nutritive value of both the diets This can best be done by giving an extra 4 oz. of meat to the Węlikaḍa soldier prisoners, and 4 oz. plantains to those in the Garrison Cells.

Prisons.		Albuminates.	Carbo-Hydrates.	Fat.	Salts.	Nitrogen.	Carbon.
Węlikaḍa.	oz.	oz.	oz.	oz.	grs.	grs.	grs.
Bread ...	20	1·62	10 16	·31	113	110	2,467
Rice ...	4	·26	3·10	·02	8	16	682
Meat or fish ...	4	·60	—	·34	28	41	256
Vegetables ...	4	·05	·48		12	3	105
Plantains ...	10	·48	1·90	·02	34	33	480
Sugar ...	2	—	1·90	—	—	—	369
Tea ...	½	—	—	—	—	—	—
Cocoanut ...	2	—	—	—	—	—	—
Onions ...	½	—	—	—	—	5	7
Salt and pepper ...	½	—	—	—	240	—	—
Curry-stuff ...	—	—	—	—	—	—	—
Total ...		3·01	17·54	·69	435	203·5	4,366
Military.	oz.						
Bread ...	16	1·30	8·13	·25	91	88	1,974
Rice ...	8	·52	6·20	·04	16	32	1,364
Meat ...	8	1 20	—	·67	56	83	512
Sugar ...	1	—	·95	—	—	—	185
Coffee ...	1¼	—	—	—	—	—	—
Curry-stuff ...	0¼	—	—	—	—	—	—
Vegetables ...	—	·05	·48	—	12	3	105
Salt ...	—	—	—	—	240	—	—
Pepper ...	—	—	—	—	—	—	—
Total ...		3·07	15·76	·96	415	206	4,140

I am sorry I have no means with me of calculating the value of the cocoanut in the Węlikaḍa diet. I believe its ingredients, when added to the diet, will make it as good, and probably better, than that given in the Garrison Cells.

The Dietaries of Labouring Prisoners in the Local Prisons of England and Wales.

I.—Prisoners One to Four Months.

		oz.	
Albuminates	...	3·13	Containing 215 gr. nitrogen and 4,232 gr. carbon.
Carbo-hydrates	...	16 22	
Fat	...	1·02	

II.—Prisoners over Four Months.

		oz.	
Albuminates	...	3·91	Containing 270 gr. nitrogen and 5,204 gr. carbon.
Carbo-hydrates	...	19·67	
Fat	...	1 37	

B.—Memorandum by Dr. Archer, Brigade Surgeon.

I am of opinion that, even for men at light labour, the dietary for prisoners at Węlikaḍa is deficient in albuminates, and consequently in nitrogen.

The quantity of albuminate in the diets as calculated by Dr. Kynsey is 3·01 oz, whereas the standard diet of a man in health and in ordinary work contains 4·31 oz, and that of one employed in very laborious work 6 7 oz. I recommend that the dietary be improved by the addition of 4 oz meat, and that if the prisoners are put to really hard labour, 2 oz. split peas be also added.

With a view to ascertaining the effect of the diet on the health of the men and its sufficiency or otherwise, it is very desirable that their weights on admission and discharge should be noted. As regards the dietary at the Provost Cells, I do not consider that any change is necessary, as the men confined therein are undergoing short terms only.

Colombo, July 18, 1887.

S. ARCHER,
Brigade Surgeon, Senior Medical Officer.

C.—Oral Evidence given by Dr. Archer, Brigade Surgeon.

Military prisoners do not, as a rule, get shot-drill in the Tropics. It is considered too severe. In the Provost Cells soldiers do seven hours a day stone-breaking besides fatigues. In Węlikaḍa the dietary is in some points deficient. In the Węlikaḍa dietary there are 203 grs. of nitrogen, whereas 317 grs. is the quantity supposed to be necessary for the preservation of health. A man stays in the Provost Cells six weeks at the most, and does not therefore require such a nourishing diet as in Węlikaḍa. Though the Węlikaḍa dietary is insufficient, no evil effects have been noticed in the military prisoners confined in that jail. Military prisoners are treated by the prison doctors.

XVIII.—1887.

WIDOWS' AND ORPHANS' PENSION FUND.

STATEMENT AND ACCOUNT

FOR

THE YEAR ENDED DECEMBER 31, 1887.

Prepared in terms of Section 13 of Ordinance No. 20 of 1885.

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 5 cents.]

WIDOWS' AND ORPHANS' PENSION FUND.

STATEMENT AND ACCOUNT of the Widows' and Orphans' Pension Fund for the year ended December 31, 1887, prepared in terms of section 13 of the Ordinance No. 20 of 1885.

I.—Position of the Fund.

The balance standing to the credit of the Fund in the hands of the Colonial Treasurer on December 31, 1887, was Rs. 279,324·02.

The following table shows the receipts and expenditure for each month of the year:—

	Receipts.		Expenditure		Balance.	
	Rs	c.	Rs.	c.	Rs.	c.
January ...	6,654	43	344	97	6,309	46
February ...	6,879	67	687	93	6,191	74
March .	8,011	99	762	19	7,249	80
April ...	7,053	72	1,106	29	5,947	43
May ...	7,019	11	510	73	6,508	38
June ...	7,334	60	606	71	6,727	89
July ...	7,518	74	595	84	6,922	90
August ...	6,776	98	621	12	6,155	86
September ...	7,202	92	633	50	6,569	42
October ...	7,913	71	1,905	99	6,007	72
November ...	7,004	49	695	72	6,308	77
December .	21,146	99	1,166	3	19,980	96
	100,517	35	9,637	2	90,880	33
Add Balance on December 31, 1886 ...					188,443	69
					279,324	2

Classification of the Receipts and Expenditure of the Fund during the year.

	Rs.	c		Rs	c.
By Abatements ...	86,645	48	To Pensions paid ...	7,670	50
Interest	13,869	87	Refunds	499	39
Fines	2	0	Salaries	1,369	92
			Contingencies ...	97	21
			Balance	90,880	33
	100,517	35		100,517	35

The highest amount of monthly contribution was Rs. 83·33 per mensem and the lowest was 83 cents per mensem.

II.—Contributions.

On December 31, 1887, the number of contributors on the books of the Fund was 1,606
On December 31, 1886, do. do. 1,545

Increase ... 61

Number of Officers who ceased during the year to contribute :—

	No
By Deaths	22
Dismissals	23
Resignations	33
Being discontinued from Government Service	4
Being disqualified	15
Total ...	97

III.—Pensions.

Of the twenty-two contributors who died during the year, twenty left claimants :—

1. The widow of D. H. De Fonseka, Clerk, Registrar of Lands' Office, Kandy.
2. Do H. A Dharmaratna, Muhandiram, Piṭigal kóralé north
3. Do. M. Rajavarotiar, Salt Storekeeper, Trincomalee.
4. Do Don Louis David, Second Clerk, District Court, Negombo
5. Do. R M. M Banda, Third Clerk, Fiscal's Office, Kandy.
6. Do. P. D'M. Ondaatje, Crown Counsel, North-Western Province.
7. Do. Captain W A R. Thompson, Superintendent of the Convict Establishment.
8. Do. R. C. Miller, Police Constable No. 21.
9. Do. Frank Schokman, Overseer, Convict Establishment.
10. Do. A. P Mirando, Mudaliyár, Interpreter, District Court, Negombo.
11. Do. C. L De Livera, Mudaliyár, Clerk, Public Works Department.
12. Do. N. Wijesinghe, Mudaliyár of Kandaboḍa pattu of Mátara District
13. Do. J. P Pronk, late Clerk, Audit Office.
14. Do. T Slegers, Native Writer, Minor Courts, Kalpiṭiya
15. Do John Jones, Diver.
16. Do. E. Rogers Arasaratnam, Mudaliyár, late Secretary, District Court, Mannár.
17. Do R. Breckenridge, late Sub Inspector of Schools.
18. Do. W. F. De Silva, Third Clerk, Court of Requests, Colombo.
19. The minor children of Cecil Van Langenberg, late Head Clerk, Kandy Kachchéri.
20. The widow of the late C Connah, Kannakapillai, Ceylon Government Railways

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IV.—Statement showing Pensions paid from the Fund since the last Report furnished to the Hon. the Colonial Secretary on October 4, 1887.

	Name of Pensioner, and Name of Officer in right of whom Pension is drawn	Amount of Annual Pension Rs	c		Date of commencement of Pension.
1.	Michaela, D H. De Fonseka, Clerk, Registrar of Lands' Office, Kandy ...	29	97	...	February 7, 1887
2.	Welmma, H. A Dharmaratna, Muhandiram, Piṭigal kórale north ...	32	80	...	January 27, 1887
3.	Vallipillai, M Rajavarotiar, Salt Storekeeper, Trincomalee ...	32	50	...	January 12, 1887
4.	Justina, Don Louis David, Second Clerk, District Court, Negombo ...	42	48	...	April 11, 1887
5.	Muttu Menika, R. M. M. Banda, Third Clerk, Fiscal's Office, Kandy ...	48	91	...	April 10, 1887
6.	Frances, P. D'M. Ondaatje, Crown Counsel, North Western Province ...	250	60	...	February 26, 1887
7.	Mary Louisa Jane, Captain W. A R Thompson, Superintendent, Convict Establishment	579	4	...	August 17, 1887
8.	Isabella, R C. Miller, Police Constable No 21	39	41	...	July 26, 1887
9.	Charlotte, Frank Schokman, Overseer, Convict Establishment ...	62	20	...	June 16, 1887
10.	Anna, A P. Mirando, Mudaliyár, Interpreter, District Court, Negombo ...	60	48	...	Sept. 26, 1887
11.	Johanna Charlotte Alhata, C L De Livera, Mudaliyár, Clerk, Public Works Department	39	0	...	July 28, 1887
12.	Lydia Emilia, N Wijeysinhe, Mudaliyár, Kandaboḍa pattu of Mátara District	114	10	...	June 19, 1887
13.	Mary Louisa, J P. Pronk, late Clerk of the Audit Office ...	144	4	...	May 21, 1887
14.	Jane, T. Slegers, Native Writer, Minor Courts, Kalpiṭiya ...	15	12	...	May 14, 1887
15.	Annie Fredericka, John Jones, Diver	147	88	...	Nov 30, 1887
16.	Christmapillai, E. Rogers Arasaratnam, Mudaliyar, late Secretary of the District Court Mannár	24	18	...	Sept. 14, 1887
17.	Elizabeth, Robert Breckenridge, late Sub-Inspector of Schools ...	60	6	...	Nov. 9, 1887
18.	Louisa, W. F De Silva, Third Clerk of the Court of Requests, Colombo ...	67	32	...	Nov. 14, 1887
19.	Minor children, Cecil Van Langenberg, late Head Clerk of the Kachchéri, Kandy	111	76	...	July 29, 1887
20.	Ammany Amma, C Connah, Kannakapillai, Ceylon Government Railways	81	0	...	Dec. 18, 1887

V.

The Board of Directors for the year consisted of the following :—The Hon. the Treasurer, the Hon. the Surveyor-General, the Postmaster-General, the Solicitor-General, and the Assistant Auditor-General.

Widows' and Orphans' Pension Fund Office,
Colombo, August 8, 1888.

G. T M. O'BRIEN,
F. C. H. CLARKE,
T. SKINNER,
C. P. LAYARD,
R. A. BROHIER,
} Directors.

XIX.—1887.

SUPPLY BILL, 1888.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to make provision for the Contingent Services for the year 1888."

Ordered by the Legislative Council to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 10 cents.]

EXTRACT from the Minutes of the Legislative Council, dated November 8, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to make provision for the Contingent Services for the year 1888"—

The Hon. G. T. M O'BRIEN, Acting Colonial Secretary.
The Hon. R. W. D. MOIR, Acting Auditor-General.
The Hon J. B. A. BAILEY, Acting Treasurer.
The Hon. P. RAMA-NATHAN, } Unofficial Members.
The Hon. R. B. DOWNALL, } Unofficial Members.
The Hon H. BOIS, } Unofficial Members.

SUPPLY BILL, 1888.

REPORT.

THE Sub-Committee have examined the Estimates and the Supply Bill, and after hearing the explanations of the Colonial Secretary on certain points, they are satisfied that the probable revenue for the coming year has not been over-estimated.

ESTABLISHMENTS.

As regards the expenditure, they note an increase of Rs. 5,000 on the Fixed Establishment under the sub-head Secretariat, for Cadets, but they find that the amount provided for this service is within that allowed by the Fixed Establishments Ordinance. Secretariat

The causes of the increase on the Provisional Establishment are correctly stated in the Colonial Secretary's speech in moving the first reading of the Bill. The details of the amount accounted for by quinquennial and triennial increases in the several departments, and by the supplying of inadvertent omissions in the Estimates of the current year, will be found in a statement annexed to this report. Increases on the Provisional Establishment.

The proposed increase to the salary of the Surveyor-General has the entire approval of the Sub-Committee, in view of the special value of the services rendered to the Colony by that officer while acting in various capacities. Survey Department.

The Sub-Committee hope that when the ss. Serendib is superseded the Master Attendant of Colombo will not be allowed to suffer any diminution of his emoluments, the aggregate salary drawn by him being, in their opinion, by no means excessive, in view of the increased importance of the port under his supervision. Agent, Colonial ss. Serendib.

The provision for a Chief Conservator of Forests is sufficient to enable the Government to secure the services of a thoroughly qualified Forester, and it is hoped that an officer specially trained in forestry may be appointed to this important post at the earliest possible date. Forest Department.

The amount provided under this sub-head will suffice for the expenditure for three months only. The Sub-Committee have been informed that provision is also made in the Supplementary Supply Bill of the current year for three months' expenditure in this year, but it is very unlikely that the Registrar will complete his labours at the end of the first quarter of 1888. It is, however, impossible at present to estimate with any degree of certainty what length of time will be required for the work, and it is understood that provision will be made in the Supplementary Supply Bill of 1888 for whatever additional amount may be found to be necessary. Registration of Titles to Land

It has been explained to the Sub-Committee that the allowances "in aid of incidental expenses of certain churches" are in reality but a continuance of the personal allowances to the clergymen concerned, who still draw salaries on the Establishment; and on this understanding they see no objection to this vote. Ecclesiastical.

The papers placed before the Sub-Committee on the subject of the appointment of an Accountant for the Railway on a salary of Rs. 5,000 have satisfied them of the necessity for the addition. Railway.

The following additions (not provided in the Supply Bill) to Establishments have been suggested by the Colonial Secretary, and are recommended by the Sub-Committee:— Additions and alterations recommended.

Provincial Agencies, sub-head Negombo.—Rs. 1,500 to meet the salary of the President of an additional village tribunal to be established in 1888.

Registrar-General, sub-head North-Western Province.—Rs. 500 and Rs. 120 on account of the pay of a clerk and messenger for the registration office to be established at Chilaw, and an increase of Rs. 50 in the contingent vote, for furnishing the office.

The Sub-Committee also recommend the transfer of the items of Rs. 1,500, Rs. 300, and Rs. 500, at present appearing under Establishments, sub-head Botanic Gardens, for the purchase of various articles, to the sub-head Botanic Gardens under Services exclusive of Establishments; the transfer of the votes for the Piṭipana, Mahahunupiṭiya, Mipé, Héwessa, and Godagamuwa schools, which are to be closed, to the Kalapahana, Galapitimada, Máboṭiya, Munhéna, and Alutgama schools; and the re-arrangement (involving no increase of expenditure), which is noted in the revised copy of the Estimates appended to this report, of the salaries of certain Sub-Inspectors and Assistant Sub-Inspectors in the Department of Public Instruction.

SERVICES EXCLUSIVE OF ESTABLISHMENTS.

The Sub-Committee recommend that the votes to the several Government Agents for payment of Pensions, Retired Allowances, and Gratuities be amalgamated and voted in block to the Government Agents generally, so as to admit of an excess over the estimate of the requirements of one Kachchéri being met from the savings at others. Pensions.

Under the sub-head Botanic Gardens the Colonial Secretary has proposed, and the Sub-Committee have pleasure in recommending, an additional vote of Rs. 500 for the improvement of the Hakgala Gardens. Botanic Gardens.

Administration of Justice.

It is proposed to strike out the votes to the Government Agents for refunds of fines, as such refunds will in future be made by the Treasurer from his vote for refunds.

Addition to vote.

The new votes under the sub-head Fiscals on account of "batta to headmen escorting prisoners" have the approval of the Sub-Committee as an equitable provision for services rendered; and at the instance of the Colonial Secretary they recommend the addition of a sum of Rs. 1,500, for which the Fiscal of the Northern Province has applied for this service since the Estimates were printed.

Hospitals and Sanitation.

Addition to vote.

The total of the votes for Hospitals and Sanitation exceeds that for the current year by Rs. 17,974·25, but in view of the amount that will have to be voted this year in the Supplementary Supply Bill for this service, the Sub-Committee do not consider that a smaller vote would be sufficient. The Colonial Secretary has suggested the addition of Rs. 1,440 to the vote for attendants in the Nursing Department of the Colombo Hospital. The addition will enable the Principal Civil Medical Officer to engage two more nursing sisters, and the Sub-Committee have much pleasure in recommending that it be allowed.

Police and Prison Services.

As the report of the Commission appointed to inquire into the working of the Prisons Department will shortly be laid before the Council, and as the intention of Government has been announced to appoint a Commission to report on the working of the Department of Police, the Sub-Committee refrain from making any observation on the votes for Police and Prison Services, beyond remarking that on a comparison with the votes for the present year they do not appear to be excessive.

Transport.

An addition of Rs. 200 under the sub-head Presidents of Village Tribunals to the vote to the Government Agent, Central Province, has been proposed by the Colonial Secretary, and is recommended by the Sub-Committee.

Public Works.

The Sub-Committee note with pleasure that the provision for public works, exclusive of maintenance of roads, exceeds that for the present year, if the appropriation of Rs. 200,000 to minor irrigation works under Ordinance No. 2 of 1887 be taken into account, by upwards of Rs. 150,000. They have carefully considered the several items appearing in the Supply Bill, and also the alternative works included in brackets in the Estimates, and they submit the following recommendations.

They attach great importance to the early completion of the Nambapána road. The amount provided in the Supply Bill, Rs. 30,000, would suffice only for the bridging and for the making of a rough tavalam road between the bridges, while an additional Rs. 28,000 would complete the whole work during the coming year. They are strongly of opinion that the vote should therefore be increased to Rs. 58,000.

In regard to the vote of Rs. 15,000 for the extension of the Rakwána-Morowak kóralé road, the Sub-Committee are of opinion that the money should be spent in extending the Rakwána end of the road, and that the extension should be made as a second class road. This will enable the Director of Public Works to construct a longer section of the extension, which will at once serve a group of twelve estates; and the Sub-Committee are satisfied that the construction of a first class road is neither justified nor required by the circumstances of the district.

The Colonial Secretary has suggested the insertion of a vote of Rs. 1,500 for making a road from Walahápitiya to Pilakaṭamulla, and the Sub-Committee concur in his recommendation. In the Supply Bill for 1887 a sum of Rs. 2,200 was voted for the construction of a road from Tabbuwa to Pilakaṭamulla: subsequently the Superintending Officer reported that the district would be much better served by the adoption of an alternative trace from Walahápiṭiya to Pilakaṭamulla, at an additional cost of Rs. 1,500. No portion of the vote of Rs. 2,200 has yet been expended, and it is proposed to bring it forward, and, with the consent of the Council, to make it available, together with the present vote of Rs. 1,500, for the construction of the road from Walahápiṭiya.

The Sub-Committee have considered a proposal which was recommended last year for constructing a road from Hindugala to Ella, but not adopted then for want of funds, and they are of opinion that the work is one which should be undertaken.

The completion of the Punnalai Causeway is one of the alternative works included in brackets in the Estimates, and the Sub-Committee unanimously and strongly recommend that the necessary vote of Rs. 40,000 be granted for the work.

With regard to the alternative votes of Rs. 20,000 for providing additional quarters for the Police in Colombo, and Rs. 29,344 for building a new hospital at Anurádhapura, the Sub-Committee are divided in opinion, Mr. Ráma-Náthan favouring the latter, Mr. Downall, Mr. Bois, and the remainder of the Sub-Committee giving preference to the former. Mr. Ráma-Náthan very properly points out that the Sub-Committee are not in possession of plans and detailed estimates of the cost of the Police quarters, but the remainder of the Sub-Committee, in view of the admitted necessity from the point of view of discipline and efficiency for bringing the Police who are now scattered in private lodgings over the town into quarters with the least possible delay, and in view also of the fact that the Inspector-General of Police undertakes that suitable quarters for the whole of the Fort Police can be provided near the Breakwater without exceeding the proposed expenditure of Rs. 20,000, are unanimous in recommending that provision should be made accordingly.

The Sub-Committee consider that the Queen's House, Colombo, should be provided with a bath and water-supply, and they recommend the expenditure of Rs. 2,040 for the purpose. They also recommend the alteration, under *Maintenance of Roads*, of "Pundalu-oyá-Wattagoḍa road, seven miles, Rs. 1,680," to "Pundalu-oya-Wattagoḍa road, seven and a half miles, Rs. 2,000," to provide for the upkeep of an additional half mile of road, which is now maintained privately, but will be taken over as a principal road on the completion of the extension about the beginning of next year.

Appropriation of labour.

In connection with the appropriation of days' labour for the maintenance of principal roads, the Sub-Committee have had under their consideration the memorial from the Provincial Road Committee, Galle, representing that the allowance made of 10 per cent. for deficiencies in calculating the amount available for the purpose, is insufficient; and they have also informed themselves

regarding similar representations that have been received from the Western and Central Provinces. These Road Committees contend that the proper starting point for the ascertainment of the amount that ought to be available is the amount returned as recovered in the last and previous years. The Government, on the other hand, contend that the adoption of such a starting point is inadmissible, because it would cause the amount available for principal roads to vary with the relative capacity and incapacity of the officers responsible for carrying out the provisions of the law, and also because it is inconsistent with those provisions. The Thoroughfares Ordinance of 1884 sets out the mode in which the amount of labour or commutation to be given to the principal roads is to be arrived at, and the basis of the calculation is the number of the persons "liable to perform labour on the roads." This is the basis which has been adopted by Government, who have accepted the returns of persons liable to labour as made by the Committees, although in some instances, and notably in certain districts of the Western and Southern Provinces, those returns obviously fall short of the real number of persons liable. From the number so shown the amounts claimed by the Road Committees for the cost of collection, the cost of establishments, and the number of persons not available for the principal roads by reason of their living beyond the limit of ten miles from any principal road, have been deducted, and a further deduction of 10 per cent. on the total number returned by the Committees as liable has been made to meet loss by exemptions, deaths, and other causes, although by law no such deduction is prescribed. As already stated, the Road Committees in the three Provinces mentioned complain that this deduction of 10 per cent. is insufficient to meet the case, and they allege as the main ground for their contention that the population with which they have to deal migrates to such an extent that it is very difficult for them to enforce or collect more than 80 per cent. of the labour or commutation due by law. It is not apparent where the floating population migrates to, as the difficulty is alleged equally in all the three Provinces, and the Sub-Committee find that in the other Provinces an allowance of 10 per cent. for deficiencies is sufficient, and in some even more than is required. They find also that in various parts of the three Provinces which complain of the insufficiency of the allowance, the cost of establishments is excessive; and that the number of exceptions in some cases, and of "persons unaccounted for" in others, are irreconcilable with the hypothesis of a due administration of the law, especially when regard is had to the very large powers thereby granted to chairmen of Road Committees, and the fact that each year's working of the Thoroughfares Ordinance of 1884 should show improved results. Taking, however, into account the fact that this is the first year in which the "numerical abstracts" have been taken as the basis of the computation of the amount available for principal roads, the Sub-Committee recommend that the allowance of 10 per cent. for deficiencies be raised in the case of the Western, Central, and Southern Provinces to 15½, 12½, and 15 per cent. respectively. They have been assured by the Director of Public Works that the amount of labour to be rendered when this further deduction has been made will, together with the money votes in the Supply Bill, suffice for the proper maintenance of the principal roads during next year, without entailing any over-expenditure on the votes. They therefore recommend the increases suggested of the allowance for deficiencies, but they at the same time express the hope that in subsequent years the Road Committees in question may be able to work satisfactorily with an allowance of no more than 10 per cent.

They regret that they cannot recommend the provision of Rs. 10,000 (inserted in brackets in the Estimates) for converting the present Castlereagh bridge into a cart bridge. They acknowledge that the proprietor of Castlereagh estate has strong claims to consideration in view of the fact that the bridge which was erected at his expense has always been open to the public; but they learn from the Director of Public Works that its conversion into a cart bridge would practically determine the direction of the extension of the road, as to which there is considerable difference of opinion amongst the proprietors of the estates concerned. For this reason they are unable to recommend the expenditure.

As regards the vote of Rs. 15,000 for the Riṭigaha bridge, the Sub-Committee understand that the amount will suffice only for the construction of a bridge considerably below high flood-level, the cost of constructing a bridge above such level being estimated at Rs. 70,000. They learn from the Director of Public Works that he has no apprehension regarding the stability of the bridge if constructed as proposed, and they understand that the landed proprietors interested are satisfied that the proposal will meet their requirements. Under these circumstances they agree in recommending the expenditure.

To provide for the expenditure involved in their recommendations, the Sub-Committee unanimously recommend the following alterations in the Supply Bill :—

(1) The reduction of the provision for constructing a telegraph line from Colombo to Ratnapura by Rs. 9,000. The balance of the vote will provide for constructing a line as far as Avisáwélla, which, in the opinion of the Sub-Committee, will suffice for the coming year.

(2) The reduction of the grants-in-aid of the Uḍa Dumbara-Bintenna road and the Galawela road, from Rs. 5,000 each to Rs. 2,500 each. The Sub-Committee are not opposed to these grants-in-aid, but they consider that they may well be temporarily reduced in order to make provision for more important works.

(3) The omission of the vote of Rs. 14,000 on account of the Monarágala-Welláwaya road. Great difficulty is experienced in procuring labour for the construction of this road, and no less a sum than Rs. 28,000, unexpended balances of previous votes, is being brought forward for expenditure in 1888 on the work.

(4) The omission of the vote of Rs. 10,000 on account of the Kompaspára road. Owing to difficulties connected with the acquisition of the necessary land, it is understood that hardly any of the previous vote for this road has been expended; and, apart from this, the Sub-Committee regard it as less pressing and less important than the works for which they desire to make provision.

(5) The omission of the vote of Rs. 2,200 for the improvement of the Dikwella-Madulla road, in order to partially provide the sum required for the much more important road from Hindugala to Ella.

(6) The omission of the vote of Rs. 5,000 for a bridge at Wakwella. The bridge will be of no service till a road to it has been made, and the Sub-Committee are informed that there is no likelihood of this being done during the coming year.

(7) The omission of the vote of Rs. 31,300 for the reconstruction of the Tóppu bridge. This is a desirable work, but the necessity for it cannot be compared with that for completing the Punnalai Causeway, especially as the bridge is temporarily replaced by an excellent ferry.

The net result of the adoption of the Sub-Committee's recommendations is an increase in expenditure of Rs. 1,360, which is proposed by the Colonial Secretary and endorsed by the Sub-Committee.

Miscellaneous

The mode in which provision, estimated at Rs. 200,000 under the sub-head Treasurer, has been made for the payment to the Irrigation Board of the appropriation sanctioned by Ordinance No. 2 of 1887, has the approval of the Sub-Committee, and is, in their opinion, in strict accordance with the intention of the Legislature in passing the Ordinance.

Additions.

Under the sub-head Government Agent, Central Province, "compensation for local rates on Government buildings, Kandy," the necessity has been shown by the Colonial Secretary for an addition of Rs. 884·24, and the Sub-Committee therefore recommend that the vote be increased to Rs. 6,384·24.

An additional vote to the Collector of Customs, Galle, of Rs. 250, proposed by the Colonial Secretary for the purchase of a surf boat for Hambantota, is recommended by the Sub-Committee.

Military Expenditure

In connection with the vote of Rs. 175,000 on account of the "Colombo Defences" the Sub-Committee desire to express their earnest hope that the estimated cost to which the Legislative Council have agreed for this service may not be exceeded.

Railway Services.

Under the sub-head Crown Agents the Sub Committee suggest that the description of the vote of Rs 90,000 should be altered so as to run, "Railway interest on loan under Ordinance No. 2 of 1886," and in doing so they venture to add the expression of their hope that in the event of the extension to Haputalé not being undertaken at present, the whole of this amount may be rendered available at an early date for the purposes of the extension to Bentota.

Attached to this report will be found revised copies of the Estimates and the Supply Bill for 1888, showing the alterations that will have to be made therein if the recommendations of the Sub-Committee be adopted by the Council, and a list of unexpended balances which it is proposed to bring forward for expenditure during next year.

G. T. M. O'BRIEN.
R. W. D. MOIR.
A. BAILEY.
P. RA'MA-NA'THAN.
R. B. DOWNALL.
H. BOIS.*

Legislative Council Chamber,
Colombo, November 30, 1887

* Mr. Bois signed the Report at an earlier date, as he was about to leave the Island. No alterations, other than mere verbal alterations, have been made in the Report since he signed it.

APPENDIX.

A.

LIST OF BALANCES to be brought forward for Expenditure in 1888.

No. of Estimate.	Date of Sanction.	Service.	Amount. Rs. c	Total. Rs c.
	1886.	SUPPLY BILL, 1885.		
1,023	Nov. 19	For constructing a 6-ft. bridle road from St. Margaret's to Uḍa Pussęlláwa estate	1,020 0	1,020 0
		SUPPLY BILL, 1886.		
3	March 4	For re-constructing grain shed at Jaffna	700 0	
39	Feb. 24	For metalling fourteen miles of North-Central road between 114th and 128th mileposts	2,500 0	
1,015	Nov. 17	For the restoration of Mamadu tank	1,000 0	
	1887.			
9	May 2	For erecting a jail hospital at Bomgambara	5,767 0	
29	Feb. 4	For constructing a road from Wellawáya to Monarágala	13,000 0	22,967 0
	1886.	SUPPLEMENTARY SUPPLY BILL, 1886.		
655	May 13	For certain repairs to Mihintalé dágoba	1,169 0	1,169 0
	1887.	SUPPLY BILL, 1887.		
9	May 2	For erecting a jail hospital at Bogambra	3,233 0	
277	Jan. 24	For erecting a bridge over the Maskolıya-gaṇga	3,000 0	
670	May 25	For certain additions to the district hospital at Maskolıya	572 0	
671	May 25	For building a storeroom at the district hospital, Dikoya	644 0	
880	Aug. 3	For building headworks over the Bilihul-oya	3,000 0	
911	Aug. 26	For cutting a channel from the spill at Iratperiyakulam, erecting a 45-ft. span bridge, and embanking the North-Central road	3,500 0	
910	Aug. 26	For additional spill wall and straightening the bund of Mamadu tank	1,500 0	
804	June 14	For the restoration of Mandukottai tank	5,000 0	
35	Feb. 15	For metalling the road from Elephant Pass to Iranamadu	1,000 0	
24	Mar. 17	For converting a portion of the Kompaspára into a natural road	3,180 0	
	1886.			
607	April 29	For constructing an anicut across the Walawé-gaṇga at Liyangahatoṭa	8,000 0	
	1887.			
41	June 10	For the improvement of Akkarai pattu road	3,600 0	
295	Jan. 31	For constructing foot bridges between Akkarai pattu and Sembatta estate	1,278 0	
		Vote for the Tabbuwa and Pilákaṭumulla road	2,200 0	
908	Aug. 26	For building stream crossings, distributing sluice, and bridges at Kadukamunai channel	1,250 0	
29	Feb 4	For constructing a road from Wellawáya to Monarágala	15,000 0	
620	April 25	For building walls along the Kanda-ęla, and for masonry at stream crossing	2,000 0	
762	June 7	For building retaining walls along the Diyakola-ęla	1,000 0	
884	Aug. 11	For constructing an anicut across the Kattiyanáru and north and south channels leading from it	7,500 0	
1	May 31	For building permanent cooly lines in Avisáwélla district	1,500 0	
	1887.			
13	Feb. 16	For certain works to the Maradána Police barracks	5,808 0	
784	June 1	For improvements to the Colombo Customs	1,270 0	
783	June 1	For the erection of a cement concrete cylinder jetty, Colombo Customs	7,000 0	
	1886.			
278	Oct. 8	For erection of an iron bridge over the Karawanęlla	17,100 0	
288	Feb. 5	For filling up the Fort canal and certain improvements to York street	7,500 0	
	1887.			
983	Oct. 29	For pipe sluice to village tanks in Ulagalla and Máminiya kóralés	2,000 0	
971		For works connected with the Dędduwe reclamation scheme	2,000 0	110,635 0
		SUPPLEMENTARY SUPPLY BILL, 1887.		
750	May 23	For constructing an irrigation channel from Liyangaha-ęlla anicut to Mamadola, Tawaluwila, and Etbatuwa	13,000 0	
1,111	July 23	For the restoration of Nuwarawęwa, North-Central Province	5,000 0	18,000 0
			Total ...	153,791 0

B.

LIST OF INCREMENTS to which Government is pledged under existing agreements, and accidental Omissions in Estimates for 1887 supplied.

	Omissions in Estimates of 1887. Rs. c.	Increments. Rs. c.
Secretariat.		
Assistant Government Printer	—	10 0
Agent, Western Province.		
Clerk, Pension Branch	500 0	—
Agent, Eastern Province.		
Extra Clerk for commutation duties	600 0	—
Native Writer for do.	360 0	—
Public Works Department.		
Financial and Office Assistant	—	833 0
Draughtsman, Central Province	720 0	—
Master Smith (amount short provided)	250 0	—
Master Carpenter (amount short provided) ...	250 0	—
Clerk, Grant-in-aid Roads	800 0	—
Survey Department.		
Trigonometrical Assistant	—	219 44
Pay of messenger (short provided)	36 0	—
Post Office.		
Third Additional Parcel Post Clerk	—	68 0
Accountant, Money Order Branch	—	48 0
Assistant Postmaster, Batticaloa	—	120 0
Increments to Postmasters	—	3,000 0
One Postman, Moratuwa	180 0	—
Public Instruction.		
Two Sub Inspectors	1,100 0	—
Increments to Teachers	—	1,444 0
Medical Department.		
Increments to Colonial Surgeons, &c.	—	1,904 0
Increments to Sub Assistant Colonial Surgeons ...	—	553 0
Prisons Department.		
Deputy Jailer	—	100 0
Do.	—	50 0
Do.	—	50 0
Jailer, Kurunégala	—	100 0
Jailer, Tangalla	—	40 0
Jailer, Badulla	—	50 0
Colonial Store.		
Sub-Storekeeper	—	30 0
Railway Department.		
Increments, Finance and Traffic Department ...	—	5,837 0
Increments, Locomotive Department	—	8,722 0
Total ...	4,976 0	23,178 44

XX.—1887.

CRIMINAL PROCEDURE AMENDMENT BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend the Criminal Procedure Code, 1883."

Ordered by the Legislative Council to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 5 cents.]

EXTRACT from the Minutes of the Legislative Council, dated November 23, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend the Criminal Procedure Code, 1883":—

The Hon. G. T. M. O'BRIEN, Acting Colonial Secretary.
The Hon. S. GRENIER, Attorney-General.
The Hon. F. R. SAUNDERS, C.M.G., Government Agent Western Province.
The Hon. P. RÁMA-NÁTHAN, } Unofficial Members.
The Hon. A. L. DE ALWIS, } Unofficial Members.
The Hon. R. A. BOSANQUET, } Unofficial Members.

REPORT.

THE Sub-Committee appointed to consider the Bill amending the Criminal Procedure Code, 1883, have the honour to report as follows :—

2. The Committee are not agreed as to the expediency of retaining both the provisions relating to (1) trial by judge without a jury and (2) the reduction of the number of the jury in all but murder cases from nine to seven, but they unanimously recommend the adoption of clause 6, as amended in the accompanying draft, in the event of clauses 2, 3, and 4 being omitted.

3. The Committee recommend the following amendments in the Bill :—

Clause 1.—In view of all the three panels of jurors prepared under section 327 of the Code not being available in some parts of the Island, it would be well to confine the accused's choice of a jury to the respective panels summoned for attendance and service during the criminal sessions at which he might be tried.

Clause 7.—The ultimate decision as to what jury shall sit must rest with the judge, while at the same time it should be distinctly provided that the accused should not in any case be allowed as of right the jury he asks for.

Clause 8.—The signature of the interpreter may be dispensed with in depositions taken in cases tried summarily in Police Courts. It should, however, be insisted upon in all other cases, except those tried by the Supreme Court.

Clause 12.—A proviso similar to that contained in section 474 of the Code should be added to this clause, which is intended to apply to persons affected by the statements therein referred to who are not themselves on their trial as accused parties, but who may come forward as witnesses either for the prosecution or defence.

Clause 19.—An explanation as to the real scope and effect of this clause should be added thereto. If properly administered, the enactments contained in this clause should tend to make inquiries before commitment more thorough and satisfactory.

4. The Committee also recommend that further provision be made in the Bill for the following purposes :—

(*a*) To allow of a police officer endorsing over a warrant for execution to another police officer, as authorised by section 79 of the Indian Code ;

(*b*) To provide for the summary and prompt trial in the Supreme Court of witnesses on alternative charges for giving false evidence ;

(*c*) To prescribe the mode of remanding persons suspected to be of unsound mind for medical observation ;

(*d*) To legalise the prompt punishment by whipping of juvenile offenders under twelve years of age within the precincts of the court.

5. To give effect to the recommendation in the preceding paragraph, the Committee submit the new clauses 21, 22, 23, and 24, appearing in the copy of the draft Bill herewith sent.

G. T. M. O'BRIEN.
S. GRENIER.
F. R. SAUNDERS.
P. RA'MA-NA'THAN.
A. L. DE ALWIS.
R. A. BOSANQUET.

Legislative Council Chamber,
Colombo, December 12, 1887.

XXI.—1887.

STATEMENT

SHOWING

THE AMOUNT OF SCHEDULE FEES RECEIVED BY THE SEVERAL FISCALS

DURING

THE QUARTER ENDED SEPTEMBER 30, 1887.

(In continuation of No. 1. of 1887.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 5 cents.]

FISCALS' SCHEDULE FEES.

STATEMENT showing the Amount of Schedule Fees received by the Fiscals of the several Provinces, agreeably to the 16th clause of the Ordinance No. 4 of 1867 and Ordinance No. 43 of 1884, during the Quarter ended September 30, 1887.

Province and District.	Quarter ended September 30, 1887.							
	July.		August.		September.		Total.	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
Western.								
Colombo	460	25	425	50	483	55	1,369	30
Negombo	129	45	136	20	137	70	403	35
Kalutara	136	40	143	35	144	80	424	55
Ratnapura	32	80	20	95	34	30	88	5
Kégalla	26	30	36	5	41	5	103	40
Avisáwélla	25	40	5	15	13	45	44	0
Total ...	810	60	767	20	854	85	2,432	65
North-Western.								
Kurunégala	56	75	71	45	86	85	215	5
Chilaw	52	55	35	55	70	25	158	35
Puttalam	27	30	23	55	25	30	76	15
Kalpiṭiya	8	75	4	85	5	95	19	55
Total ...	145	35	135	40	188	35	469	10
Eastern.								
Batticaloa	122	0	125	35	106	30	353	65
Trincomalee	48	80	24	65	57	95	131	40
Total ...	170	80	150	0	164	25	485	5
North Central.								
Anurádhapura	10	50	6	95	9	0	26	45
Central.								
Kandy	196	90	137	40	191	80	526	10
Mátalé	24	5	9	30	27	45	60	80
Nuwara Eliya	6	95	6	65	7	35	20	95
Hatton	29	50	27	50	30	75	87	75
Total ...	257	40	180	85	257	35	695	60
Uva.								
Badulla	56	55	46	15	56	80	159	50
Northern								
Jaffna	337	5	409	25	290	55	1,036	85
Mannár	5	10	18	15	15	25	38	50
Mullaittívu	12	80	5	20	2	45	20	45
Vavuniya-Viláṇkulam ...	0	85	2	5	0	50	3	40
Total ...	355	80	434	65	308	75	1,099	20
Southern.								
Galle	212	65	248	5	216	55	677	25
Mátara	174	10	130	0	119	10	423	20
Taygalla	14	40	28	35	53	0	95	75
Hambantoṭa	5	0	3	80	9	35	18	15
Balapiṭiya	49	45	82	65	74	30	206	40
Total ...	455	60	492	85	472	30	1,420	75

RECAPITULATION.

	Quarter ended Sept. 30, 1887.	
	Rs.	c.
Western Province	2,432	65
North-Western Province	469	10
Eastern Province	485	5
North-Central Province	26	45
Central Province	695	60
Province of Uva	159	50
Northern Province	1,099	20
Southern Province	1,420	75
Total ...	6,788	30

XXII.—1887.

REPORT

OF THE

GOVERNMENT AGENT, NORTH-CENTRAL PROVINCE,

ON THE

PETITION OF CERTAIN PERSONS

PRAYING FOR

EXEMPTION FROM LABOUR ALONG THE YÓDA-ẸLA.

(In continuation of Sessional Paper VI. of 1887.)

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 10 cents.]

REPORT.

IN this petition will be found two distinct complaints :—

(*a*) That "rájakáriya" is illegally exacted by officials ;

(*b*) That villagers are oppressed by being required to work on the Yóda-ęla.

I propose to deal with these complaints separately, and afterwards to comment on the petition paragraph by paragraph.

2. But, first, it is necessary to show what is now meant by "rájakáriya." Formerly this meant forced service for Government without pay. It is now laxly applied to any work performed by the villagers under the communal rules. The ancient communal system still exists in this Province, and all village works, such as clearing channels and tank bunds, keeping village paths and villages clear of jungle, cultivation of fields, erection of fences, erection of village schools, &c., are done in shares (paṇgu) by the villagers according to each man's holding of land. These ancient customs are preserved and enforced by Gaṇsabháwa rules, passed under Ordinance No. 26 of 1871 ; and the works done by the people for their common advantage are now called "rájakáriya," *i. e.*, "king's service."

3. Lower down will be found the rules proclaimed in the *Gazette* under date June 20, 1874. Except the works provided for under these rules, the villagers are required to perform no other work or rájakáriya of any sort. Any official exacting any such without payment would be liable to punishment. It is the village headman (árachchi or vidáné) who is required by the custom of the country from time immemorial to supply provisions to the Government Agent or his Assistant when on circuit. It is the duty of the official to see that all supplies are paid for, as it is the duty of the headman to supply them. Ordinary villagers are not required to give provisions. As there is no such thing as a market, such a system is an absolute necessity, or travelling outside the line of high roads and resthouses would be impossible.

4. It is important to ascertain whether the villagers whose names appear as "signatories" had a *bonâ fide* grievance sufficient to induce them to pay money for a petition ; whether they knew the contents of the petition ; what it is that they really desired should be represented ; and their character as industrious and law-abiding persons or otherwise.

5. I must commence by saying that the inhabitants of these villages have long been notorious for their laziness and unreasonable impatience of any works which they are legally required to perform. When this Province was formed, under Mr. Dickson's administration, he was so disgusted with them that he refused to camp near their villages, saying they should be considered as the ගබලයෝ (gahalayó) were by the Kandyan kings. When called out for work on the roads under the Thoroughfares Ordinance, they refused to do task work, and mobbed the Superintendent of Minor Roads. There are several men among them noted as "jungle proctors," of whom Nambirála is the principal. His history is well known here. He has supported himself, since his dismissal from Government service for suppressing evidence in a criminal case, by advising and promoting lawsuits, and collecting money for petitions.

6. This man got up this petition for his own advantage, well knowing that many of the surrounding villagers, from their laziness and hatred of exertion, would spend a considerable sum as a good investment towards the chance of getting off doing work, and making the public provide them with sluices and water at public expense.

7. Their real grievance is calmly stated to me by one of the petitioners (see notes), Kirihamige Appu, of Amunukola. They object to do weeding and clearing on the canal, because the labour, light as it is, would have to be done by themselves ; they could not sit idle and make the women and children work for them, as they do in the case of the village earthwork.

8. Three persons, Nambirála, Menikrála, and Punchirála, who state they have signed the petition on behalf of all the other "signatories," made a collection of money at the rate of 25 cents (sixpence) per paṇguwa, and got signatures from the donees to blank pieces of paper, and went to Colombo to have a petition drawn there and presented to His Excellency the Governor. No petition was seen by the villagers, nor any draft of it in Sinhalese. (See notes *passim*.) They went to Colombo and got a petition drawn, but returned without presenting it. They then made a second collection, and went again and presented the petition under notice.

Of Nambirála, late árachchi, I have spoken ; Punchirála is Nambirála's brother-in-law ; Menikrála is related to both, and is son-in-law of a tank overseer recently dismissed for fraud.

9. As to the charge (*a*). I sent for these men in order to inquire into the grievances set forth by them. They refused to appear before me, asserting that they were not charged with any offence, and saw no reason to accept my invitation. I then went to the villages myself to make inquiry from them and the other "signatories." On hearing I was coming the men at once went away, it is said, to Colombo. The other villagers said that the Colombo adviser of the men told them to leave whenever they heard that inquiry was about to be made by me. I have no legal means of securing their attendance for inquiry, and I am consequently unable to examine them as to details of the general charges they have made. But I have made inquiry from their relations and as many of the signatories as I could find. I annex the notes taken by me. The petitioners stated that they had no grievance, except having to go to work at Yóda-ęla, and strenuously denied and repudiated any complaint as to oppression or illegal exaction. It will be seen that out of the ten villages stated to have signed, the people of eight villages state that they desired a petition should be given to His Excellency the Governor about Yóda-ęla ; that this was their sole complaint ; and that they neither made any other nor authorised these men to make any regarding illegal rájakáriya.

10. But the people of Alutwęwa deny that they signed or authorised anyone to sign their names to this petition. They declare that the signatures, thirty in number, are forgeries. A glance at the names shows that they are all in the same handwriting, but, in order to mislead, a cross (+) is prefixed to five of the names to make it appear that the rest actually signed. This looks very much like forgery on the part of the three principals.

11. Again, the men of Nabadáwęwa assert that their names, nine in number, were fraudulently put to this petition.

12. It appears that these men only induced the eight villages to join in this petition, and failed to get the other thirty-six to join. These eight villages admit that they authorised a petition against work on Yóda-ęla, and had no other grievance. I must conclude that the drawer and adviser thought this was not strong enough, and that they then inserted the complaints against officials, the ruin of the persons driven from their houses by fines and exactions, and the ludicrous plea that the villages are not benefited by the canal.

13. I come now to complaint (*b*), and shall endeavour briefly to state why the petitioners have been called upon to labour on the canal, and the authority under which this is legally required of them. But, first, it may be well to mention that Government supplies a sluice for a village tank free of payment, on condition that the villagers perform the earthwork necessary to complete and maintain in good order the bund of their tank.

14. Under this system seven out of the ten villages named in the petition have been supplied with sluices and masonry spills free of money payment. Three are unsluiced—Nabadáwęwa being too small, and the remaining two not sufficiently improved to have a sluice erected. These seven sluices have cost about Rs. 10,000.

15. On the completion of the Yóda-ęla, at a cost of about Rs. 240,000, it became necessary to provide for its upkeep, and at the same time the question arose as to recovery of water-rate on the lands irrigated from this canal. I stated reasons to Government for my opinion, that it is undesirable at present to proclaim these lands under Ordinance No. 2 of 1873, which would make them liable to payment of water-rate, and I pointed out that in lieu of money payment the expense of upkeep could be met by employment of village labour, and that this was provided for under Gapsabaháwa rules, for clause 36 (*a*) regulates the contribution of labour:—

V.—Village Tanks

Preface. 36. The following provision shall be made for the upkeep, repair, and improvement of village tanks which supply water for lands belonging to private individuals:—

Labour how contributed (*a*) Every paṇguwa shall give annually such labour, not exceeding thirty days' labour for an able bodied adult, as the Government Agent may declare to be necessary for the upkeep, repair, or improvement of the tank on which it is dependent for its water supply.

By 36 (*b*) this labour is regulated when a work for the improvement of a tank—in this case a canal—is provided by Government:—

Rate of labour per panguwa at the times of special and heavy works. (*b*) When Government provides a sluice or other work for the improvement of the tank, the labour declared to be necessary as above shall not exceed sixty days for one year and thirty days for every succeeding year.

Committee has power to require further labour. (*c*) Further labour may be required in special cases upon order of the committee.

By clause 37 the Government Agent determines the time and proportion of labour:—

Government Agent to determine labour. Notice how published. 37. The labour shall be called out at such times and in such proportions as the Government Agent or any person deputed by him in that behalf may determine, and notice published by beat of tom tom in the village shall be held to be notice to every paṇgukarayá.

Commutation of labour. Penalty 38. Any paṇguwa may commute its labour by a payment in advance of 35 cents per diem, and if any person who does not commute shall fail to give the labour due for his panguwa at the appointed time, or when attending for labour shall fail to do a fair day's work, he shall be liable to a fine of half a rupee a day.

Under this clause I determined that it would be fair to Government and to the people that out of the thirty days' labour fixed, fifteen days should be devoted to the village tank, and so much of the remaining fifteen days as might be necessary should be apportioned to the canal which feeds these tanks.

16. It will be seen from the statements annexed that the fifteen days' labour possible resulted in being only two or three. The distances from the villages to the places on the canal where their paṇgu lie are as follows:—

	Miles		Miles.
Pottégama ...	... 3	Galmaduwa ...	... 4
Hurigaswęwa ...	... 3½	Kęlé Diwulwęwa	... 4
Rajjallégama ..	... 3½	Pahala Hammullęwa	... 4
Amunukola ...	... 4	Męḍiyáwa ...	... 4½

The Thoroughfares Ordinance prescribes ten miles as the limit within which labour can be called out.

17. My proposal was sanctioned by Government, and I took charge of the canal from January 1 last. It was fully completed, and required nothing further than to clear the weeds and scrub which spring up in wet weather, and which must, as on a tank bund, be cleared once a year in the dry weather. Villagers' cattle do much damage to the banks by making paths and crossings, which require some attention at the same time. Government allowed Rs. 5,000 for the payment of two guardians and coolies for regulating the distribution works and spills along the fifty-four miles of canal.

18. It will be seen from the annexed Sessional Paper XXIX. of 1886 that there are forty-four inhabited villages (reckoned subsequently at 831 paṇgu) which receive water from the canal, excluding the Anurádhapura tanks. I accordingly divided the bund into 831 equal parts. I held

meetings, and explained to the people the system of upkeep in future. All, except the people of these eight villages, stated their willingness to carry out the proposal. I informed the petitioners then, that if they refused to obey the rules they must take the consequences of their default. The petitioners have done only the fifteen days' labour on their tanks, and have not done the other fifteen days on either tank or canal. All the other villages have completed the work, and are well satisfied.

19. I shall now deal with the petition, paragraph by paragraph :—

Para. 1.—"Humbly showeth,—That ever since the introduction of the Village Tribunals into their district the petitioners have annually to clear the bunds and perform earthwork on their tanks, according to the shares of the village. They have to open and maintain a great number of communal roads, to construct Gaṇsabháwa court-houses and Gansabháwa schools, and to keep them in repair."

20. I have shown that communal works are done under authority of the rules passed by committees elected by the villagers. As to the working of these rules I desire reference to the Administration Reports of Mr. J. F. Dickson and the subsequent Government Agents of this Province.

Para. 2.—"Besides these, they have to do numerous other rájakáriya to the Government Agent and his Assistant, who are frequently on circuit. They have to attend on the Tank Superintendents and their Assistants, Surveyors, Vaccinators, and a host of other Government officials. This is the unceasing programme of rájakáriya they have to go through all round the year."

21. This charge is untrue. I deny it absolutely, and desire reference to the statements annexed. It is a fabrication of the petition-drawer or the deputies to add to the weight of the petition.

Para. 3.—"Considering the physical condition of the people of this district and the food resources of the country, it will be seen that the amount of rájakáriya each individual has to perform in the year is much more than he is equal to."

22. As to "food resources" I must quote an extract from my official diary of last year when I visited these villages, under date of August 1, 1886 :—

"Thence to Rajjallégama. There found a gang of Tamils employed by the villagers to repair the breach. This will cost at least Rs. 200. The village was full of able-bodied men, who were quietly watching their labourers doing the work. Obviously these people do not live under a very grinding system of taxation. Rode through the fields, about fifty acres, to Pahala Hammillęwa, and returned to Rajjalégama and Hurigaswęwa. Breakfasted here in a villager's house, and had a couple of hours' amusing conversation with the people who crowded around—men, women, and children. I found here twenty-nine granaries full of rice, not to speak of kurakkan granaries—more than a year's supply—and their fields under crop. It is easy to see they could afford hired Tamil labour. There was a crowd of healthy children," &c.

Para. 4.—"The Government, no doubt, has introduced the Village Tribunals for the purpose of advancing the material and social condition of the people of this district, but as a matter of fact it has, by the infliction of heavy fines for default of earthwork on tanks and for other matters, driven a vast number of inhabitants of Nuwarakaláwiya to the bordering districts of Mannár, Mátalé, and Kurunęgala. Many are the instances in which people have been dispossessed of their ancestral lands on account of their inability to pay up the enormously heavy fines inflicted by the Gaṇsabháwa.

23. This is untrue, and I give it an unqualified denial, and refer to the statements of the petitioners and of the headmen annexed. No case has occurred of persons being dispossessed and driven to other districts. The statement is an embellishment of the deputation or petition-drawer, and is repudiated by the villagers.

Para. 5.—"There can be no doubt that the Government consult the good of the people, but, nevertheless, by the unequal load of rájakáriya that has been imposed upon them, they have suffered, and they still suffer. So many, so frequent, and so heavy are the calls on each man's time for the various rájakáriya, that he oftentimes fails to attend to the cultivation of his field. By such failure, not only has he to lose his food-supply, but by the fine imposed on him for default of cultivation he has frequently to lose the share of the field itself."

24. I might use the same terms in speaking of this paragraph. The irrigation rules provide for punishment of persons who neglect to cultivate. The reason is, that neglect by individuals to cultivate part of a range of fields upsets all the arrangements of the other cultivators for the clearing of channels, fencing, and protecting the crop from birds and beasts—all of which is done in rotation, or according to share measurement. All such cases of fine are required by law to be reviewed and approved by the Government Agent. In my experience I have not seen a defence made that the neglect was caused by the shareholder having "rájakáriya" to perform. Such defence would certainly have been made if there were grounds for it.

I may be permitted to add, that the time expended by a villager in providing food for himself and his family for one year may be taken to be, at the outside, two months. Twenty-four days' labour will give twelve bushels of rice, and if chena work be included, which is for the greater part done by women and children, it will be seen that the villager has ten months in the year unoccupied, except by such rajakáriya as is provided by the village community rules. (For estimate see Mr. Elliott's calculation in the Journal of the Royal Asiatic Society, No. 31 of 1885.)

Para. 6.—"The petitioners beg to submit that they have endeavoured, and do still endeavour, to work through the heavy amount of rájakáriya they have at present to perform, believing that it is exacted for their welfare; but they submit that the load of rájakáriya already imposed on them is too heavy for them to bear. They groan under its tremendous weight."

25. This general complaint has already been fully dealt with.

Para. 7.—"That since 1883 the Government have commenced at an immense cost the restoration of Kalawęwa and the Yóḍa-ęla. The Yóḍa-ęla restoration was done on contract. It was understood that the work has been completed, and that the ęla is now ready to carry and distribute the Kalawęwa waters when that reservoir fills in the forthcoming rainy season. But the petitioners, who have already more than enough to perform in the way of rájakáriya, are now ordered by the Government Agent to clear, in the first instance, at the rate of 65 by 40 fathoms per paṇgu of jungle along the Yóḍa-ęla, and next, to do earthwork on it also, according to the number of paṇgu, or shares, they hold in the village or villages under the ęla."

26. The inference to be drawn from this paragraph is, that although the Yóḍa-ęla was done "on contract" and "was understood to be completed," yet it is still unfinished, and the petitioners are required, first, to clear jungle, and next, to do earthwork to complete it. I desire reference to be made to the statements of the village headmen as to this "tremendous" rájakáriya. The work required of a villager has unquestionably been decreased, though it was not my intention to make any reduction. The effect of the division of the thirty days' labour has been really to reduce it to about eighteen days.

Para. 8.—The landowners who are most benefited at present, and who will be hereafter benefited, are those under Tissawęwa and Basawakkulama, in the town of Anurádhapura. They own land there by purchase, and pay water-rate for water actually obtained through the Yóḍa-ęla. The petitioners have their hereditary old fields, which they have been cultivating ever so long with the water of their tanks, on which they perform earthwork. And yet the petitioners are asked to clear and do earthwork on Yóḍa-ęla, whilst the landowners under Tissawęwa and Basawakkulama are subjected to a water-rate at one rupee per acre."

27. A mixture of truth and falsehood. The sketch attached to Sessional Paper XXIX. of 1886 shows how these people are benefited by the canal, and this the petitioners cannot deny, and have not denied. (See notes taken.) I have underlined in red ink the village tanks of petitioners filled from the canal.* These tanks were hitherto precariously cultivated by storage of rain water before the restoration of the canal from Kalawęwa. They now have a certainty of two crops a year, and are saved from the consequences of a prolonged drought, such as has lately occurred. I will content myself with saying so much, for I hardly believe the petitioners are capable of stating such nonsense; and that the paragraph is the work of the petition-drawer.

The case of Tissawęwa and Bassawakkulama is quite distinct from that of the petitioners. Here Government restored two tanks at the public expense, sold the Crown land under them, and by the conditions of sale is further recouped by water-rate and tithe.

Para. 9.—"The petitioners, as has been stated, are loaded with various rájakáriya; and it is beyond their power to perform anything more in the way of labour towards the work of the Yóḍa-ęla. Unless they are exempted from this additional rájakáriya imposed upon them, and which it is impossible for them to bear, they must be permitted to leave the district and emigrate into another district, where they may die unmolested."

28. But little comment is needed on this paragraph beyond what I have already said, that the object of the petitioners is simply to have the work done on tanks performed by the women and children, and to have sluices and water at the public expense. If they can secure this in "another district" I have no doubt they will speedily go there; but such a system cannot be allowed here.

29. Before concluding this already too lengthy report, I desire to add that I have been to all the villages, and have taken the statements of the petitioners, which I annex. I found these villages still well stored with gingelly, paddy, kurakkan, and rice, notwithstanding the recent severe drought and loss of crops.

R. W. IEVERS,
Acting Government Agent.

Anurádhapura, November 28, 1887.

Statements referred to.

October 28: *Kuḍárala*, village headman of the following villages, Galmaḍuwa, Keḷeḍiwulęwa, Nabadawęwa, Pottegama, Alutwęwa, and Męḍiyawa, is present, and states:—I am arachchi over the above villages (6) out of those (10) named in the petition. It was got up by Nambirála, late árachchi. He was dismissed for suppressing evidence in a criminal case. He said it was difficult for the people to work on the Yóḍa-ęla, and they should try and get exemption and send a petition. So he and others began to collect money to go to Colombo, and have a petition written and given there. They collected money at the rate of 25 cents (sixpence) for each paṇguwa. I heard they collected Rs. 65, but I do not know how much they got. They demanded money from my family, but we did not pay because of me. Except the Yóḍa-ęla there was no grievance of any kind mentioned. I am positive of this. There was no complaint as to illegal rájakáriya exacted by anyone. Such a thing was not mentioned. I have not heard of any complaint of such a kind among the people.

From the time I know I have not known any people dispossessed of their property by fines, or driven out to other districts; nor have I heard of any such thing from my parents. I am árachchi for the last ten years.

I was told by the Raṭémahatmayá by letter to call the petitioners for inquiry. I went to Nambirála, late árachchi, first, as he lives in my village, and I told him, and he said: "Where is the order for us to go?" I read the order to him. He said: "There is no charge against me. I have no time to go to the Raṭémahatmayá." He refused to come. He knew that this was to come to the kachchéri for inquiry about the petition. D. Punchirála said he would go if his brother-in-law, the late árachchi, would go, and not otherwise. So I reported accordingly to the Raṭémahatmayá.

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* The tanks referred to are the following:—41 Rajjallégama, 45 Hurigaswewa, 46 Pahála Hammilléwa, 50 Amunukola, 55 Męḍiyáwa, 57 Alutwewa, 58 Pottégama, 52 Galmaduwa, 64 Nabaduwęwa, and 65 Kęlé Diwulwęwa.

Punchirála, árachchi, states :—I am the village headman of the villages Pahala Hammillęwa, Hurigaswęwa, and Rajjallégama. I remember when the petition was got. It was begun by D. Menikrála and Nambirála, late árachchi. Menikrála is a native of my village, and is married to a daughter of the tank overseer at Amunukola, who was recently dismissed.

They said they must send a petition to the Governor praying to be relieved from working on Yóda-ęla. So money was collected, and they went, three of them, to Colombo to give a petition. There was no complaint of any sort about rájakáriya, except about Yóda-ęla. The people had no complaint otherwise, but wanted to get off from doing this. The people did not send them to make any complaint about anything else. I have now heard they complain in the petition about illegal rájakáriya. If they have, it is a wicked lie ("wasa boruwa"). I have never known of any people ruined by fines or driven away. Such a thing has never happened in our country. I am now twelve years in office.

Nearly all the people in my division have gone and done their shares of work on the Yóda-ęla. They are well pleased, because instead of fifteen days' work on the tank they have done the Yóda-ęla work in one, two, or three days at most. If it were not for these three men frightening the people, they would willingly go and work. But these men tell them the earthwork will be increased on them.

I was told to tell Menikrála to come for this inquiry, but he refused to come.

He and the other two at once set off to Colombo. They made a second collection of 25 cents from each chena. I don't know how much they got. They said the Advocate Ráma-Náthan drew up the petition for them, and was given a fee. I know not. I only heard so from them.

Kónwęwa Punchirála, árachchi, states :—I am village headmen of Amunukola. The people of Amunukola are all related to the three men who went with the petition, but none of them went to Colombo. They gave their names for the petition, but they have all done their shares of work. They were well pleased and are now glad, as they found the work much easier than cutting earthwork for fifteen days on their tank There is no complaint of illegal rájakáriya in my division, nor were the men authorised to make any such complaint by the people. It was only to try and get off work the petition was got up. At the time the petition was started no work had been done. I have to do work myself for three paṇgu, which represent forty-five days' work I finished my work on Yóda-ęla in eight days.

No people have lost their lands in my division on account of fines, nor have they left for other districts. I never heard of any such cases in our country. No one could show one.

Our tank has now filled from the Yóda-ęla. It was not filled for the last maha crop.

Notes referred to.

November 4.— Arrived at Eppáwala and went personally to each village to inquire from the petitioners as to the grievances set forth in the petition.

AMUNUKOLA —In this village nearly all the petitioners are absent, and the people present say the men are gone to work at the Yóda-ęla. I question two who are present .—

Kirihámige Appu states :—We all agreed that a petition should be sent against work on the Yóda-ęla. The three men collected money and went to Colombo to get it drawn and presented to the Governor. No petition was drawn up in Siṇhalese. We all signed on a sheet of paper. No petition was attached to it. We had no complaint to make except about working on the canal. We cannot do that because our women and children cannot go to work there. I do not know that the petition contains any other complaints. We did not see the petition. I am related to the dismissed tank overseer. I call him "uncle," and I call Menikrála "brother" (aiyyá). I know of no complaint as to illegal rájakáriya. There has been none in this village. I do not know who drew the petition.

Bandáge Kirihámi, the only other petitioner present, says the same.

ALUTWĘWA—Of the persons whose names are attached to the petition (thirty in number), eighteen are present, and a number of the other villagers are present.

Kapurála Badderála states:—I am the principal landowner in this village. My name has not been attached to this list (shown to him), but I see the names of thirty of this village. To my knowledge none of them have signed any petition about Yóda-ęla or rájakáriya. We have all done our shares of work, and have no grievance.

Udiyáre states :—I see my name attached to this list. I never wrote it, nor did I authorise anyone to write it. Some of us can write. These signatures are false signatures, and not those of the men. No official has exacted any illegal rájakáriya from us. We have done our shares of the clearing, and are satisfied, as our work is decreased.

Appuhámi Nękętrála states :—I see my name written on this list. It is not my signature. I signed no petition, nor did I give my name for any. This is a fraudulent signature.

Kapurála and *Raṇhámi* state the same.

The other petitioners, Raṇhámi and Punchirála, Appurála 1, Kirihámi 2, Kirihámi Badderála, Kapurála, Udiyáre 2, Appuhámi Rasnakka Vedarála, Jayaturála, Piṇhámi, Raṇhámi Sirála, Appuhámi 3, and Kapurála 2, assent, and state that what the others have stated is true.

POTTÉGAMA.—Out of twelve petitioners six are present.

Sirála states :—We signed a sheet of paper which was to be put to a petition to be drawn up in Colombo. There was no petition drawn here. We only complained of the Yóda-ęla work. We have no grievances as to illegal rájakariya. We did not authorise the men to state anything about such. We know of no persons sold up for fines, nor of any who have left the district. We do not like giving straw to thatch the Gaṇsabháwa building. It is true we have our cases there. We are allowed to cultivate Crown land for chenas, free of tax.

Mudalihámi states :—We complained of having to work on Yóda ęla. It is true that the Government Agent decreased our earthwork by half on that account I have done the half earthwork, but not the clearing. I have no other grievance.

Appuhámi 1, *Appuhámi* 2, *Appuhámi Vedarála*, and *Punchirála* state the same.

The other six men are absent at chena cultivation at a distance.

GALMADUWA—Out of twenty-seven petitioners seventeen are present.

Suddahámi, vidáne, states :—My name is not on the list. I have done my share of the work on the canal. I did it in two days. I do not object to legal rájakáriya, and I know of no exaction or grievance in this village.

Mudalihámi :—I gave my name to the petition because I do not like going to work on the canal. I have no other grievance.

S. Wannihámi :—I am a member of the Gaṇsabháwa committee. I am one of the men who went with the three chief petitioners to Colombo the first time. We went to get a petition drawn to His Excellency the Governor. It was a petition about Yóda-ęla work. We went to a boutique, and the people directed us to one "Appuhami," who drew the petition for us. It was read over to us in Siṇhalese.

There were no complaints such as I have heard read out from this petition. We did not present that petition, but brought it back with us because His Excellency the Governor was not then in Colombo. I did not go the second time, and do not know what petition was given. I know nothing about the Legislative Council. I never heard of it. The people gave money for a petition to the Governor.

Kirihámi states the same as *Mudalahámi*, and the other fifteen petitioners assent, and admit they know of no cases of dispossession, or of unpaid work, or supplies for the Government Agent or his Assistant or any other such official.

KELĒDIULLĒWA.—Out of thirty petitioners, twenty-one are present on behalf of the others.

D. Banda Neketrála says:—We did not see any petition. We gave our names to be attached to a petition against the Yóda-ela work. We authorised no one to make any complaint of illegal exaction. Whatever supplies were given by our village headmen must have been paid for. I have heard of no exaction. It is said the president of the Gansabhawa takes fowls without payment. None of mine were taken No one has been driven out of this by fines or otherwise. I complain only of having to work at Yóda-ela. The people of Colombo have not to do any tank work: why should we? Our tank is now full from Yóda-ela My daughter is married to the son of Nambirála, late árachchi. I know all about the getting up of this petition, and helped to collect money.

Nambirála Neketrála:—We gave our money for a petition to get off the Yóda-ela work. We made no accusations of illegal rajákariya

Deralara Mohottála says the same.

Ukkurála, vel-vidáne:—I have not signed the petition, but I would like to get off my share. I did not sign because I thought it improper.

The other eighteen petitioners assent to what has been said by the speakers.

MEDIYÁWA.—Out of sixteen petitioners nine are present.

Appuhámi, vedarála, states:—I am father in-law of Nambirala, late árachchi. I remember he got up the petition. We collected money and got signatures on a list, and he and others went to Colombo to have a petition drawn and presented to His Excellency the Governor complaining of having to work on the Yóda ela They went to Colombo and returned a second time. I don't know when the petition was presented. I do not know that Nambirala and the others set off again when the árachchi came and called them to go to the inquiry by the Government Agent. We never saw any petition or draft of petition We gave our names to this list. Our only complaint is as to the Yoda-ela. We have no other grievances of any sort against officials. Nambirála was not desired to make any They never told us they had made any such. No persons have been dispossessed of their lands, or driven to go to other districts. We never heard of any such cases. All the tanks of the ten villages are filled from the canal. They are now full. It is true the tanks in other kóralés* have not filled yet.

Wannihámi and *Ambera Gamarála* make the same statement.

The other six men present assent. Of the other petitioners some are gone with Nambirála and others are away at cultivation.

NABADAWEWA.—There are nine signatures attached to the petition. Eight persons named are present. It is asserted by the headmen and villagers that there is no such person in Nabadawewa as "Appuwa Hénaya," second name on the list.

Velpédiya states:—I am the chief man in this village. We are dhoby caste people. My name does not appear on the list. I know of no petition to be given in Colombo signed in my village. I heard that Nambirála was collecting money. He is a man who does such frauds for his advantage.

Kakka Hénayá states:—Sometime ago Nambirala, late árachchi, and Tikirala came to us to get two fanams each from us, stating it was for a petition to be given to the Government Agent at Anurádhapura against the order of the Superintendent of Tanks to clear paṇgu on Yóda-ela. So we gave about one fanam each, and Tikirála wrote our names on a bit of paper. This paper of signatures (shown) is not the one we saw. That was a scrap of paper. None of us wrote any signature. About ten days afterwards our árachchi told us it was the order of the Government Agent to clear the canal. So we all went and did our shares. We know nothing of any petition to Colombo, and have no grievances or exactions of which to complain These signatures are not ours,—certainly that one is not mine. Most of us cannot write. This is one of Nambirála's tricks to get money.

Meniká Hénayá and *Baya Hénayá* make the same statement The other five persons assent.

HURIGASWEWA, RAJJALĒGAMA, and PAHALA HAMMILLĒWA.—Of sixty three petitioners twenty-five are present. The rest are away repairing a tank breach, which, being urgent, I do not like to take them from doing.

Nambirála, vel-vidáne, states:—I am brother of Menikrála, one of the principal petitioners. Of course, I know about the petition, though I have not signed it myself. The people complained of having to do work on Yóda-ela. We want to get off that work. Our only complaint was as to that. I would have signed, but did not like to do so as it was protesting against the Government Agent's order. It is not true, if stated in the petition, that we have other grievances We had none and spoke of none. The people who went to Colombo are responsible for what they wrote in the petition. I am not responsible for my brother.

Puncherála, vidáne, makes a similar statement.

Kaverála, vedarala, states:—I gave my name for a petition against Yoda ela work, and against that only. I make no complaint of any other rájakáriya.

Puncherála, *Badderala*, *Piyhámi*, and *Kapurála* speak in the same terms.

The other twenty-one petitioners are asked if they have anything to say as to grievances other than Yóda-ela work, and they state they have none.

* "By other kóralés" are meant kóralés not under the Yóda-ela. All the tanks under the Yóda-ela are full.

XXIII.—1887.

FINANCIAL STATEMENTS

LAID BEFORE

THE LEGISLATIVE COUNCIL

DURING THE

SESSION OF 1887.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

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I.—DETAILED STATEMENT

	R.	c.	R.	c.
Arrears of Revenue.				
Land Revenue	27607	52		
Rents, exclusive of Land	16884	23		
Licenses	114962	42		
Taxes	14577	17		
			174031	34
Customs.				
Imports	2836066	8		
Warehouse Rent	5707	97		
Plumbago	60390	40		
Sundries	1118	3		
			2903282	48
Port and Harbour Dues.				
Port Clearances	30436	22		
Boats and Moorings	1800	25		
Pilotage	42833	50		
Colombo Harbour Dues	396113	19		
Rent of Reclamation Grounds	4275	84		
Sundries	4241	1		
			479700	1
Land Sales.				
Lands	—		355498	31½
Land Revenue.				
Paddy	989783	21		
Fine Grain	64500	35		
Gardens	8761	35		
Tythes Redeemed	3182	11		
Rent of Lands	12706	58		
Licenses on Plumbago, &c.	2069	37		
Incidental	2008	32		
			1083011	29
Rents, exclusive of Lands.				
Bridges, Canals, &c.	289128	7		
Government Buildings and Houses	32272	63		
			321400	70
Licenses.				
Arrack, Rum, and Toddy	1307028	63		
Stills	12200	0		
Wholesale Dealers in Arrack and Rum	2400	0		
Retail of Salt	44000	0		
Chanks, &c.	6128	32		
Opium	2500	0		
Royalty on Elephants	5520	0		
			1380076	95
Stamps.				
Judicial, Revenue, and Postage	1036276	60		
Composition Duty	11171	86		
			1047448	46
Taxes	-		38947	39
Postal.				
On Letters, &c.	—		14443	23
Fines and Forfeitures.				
Supreme, District, and Police Courts	54044	72		
Government Agents	1287	78		
Other Departments	8964	79		
			64297	29
Government Vessels	—		59754	94
Sale of Government Property.				
Salt	848142	85		
Arrack and Rum	214	76		
Colonial Store	5433	97		
Timber	229281	28		
Weights and Measures	40	14		
Unserviceable Articles	3161	5		
Produce of Botanic Gardens	3290	11		
Crops growing on Crown Lands	2382	22		
Sundries	1752	75		
			1093699	13
Carried over ...	—		9015591	52½

OF REVENUE FOR 1886.

	R.	c.	R.	c.
Brought forward ...	—		9015591	52½
Reimbursements.				
Hospital Stoppages	1073	17		
Government Gazette, &c.	9867	31		
School Fees, &c.	20763	63		
Irrigation Works	17391	53		
Survey Fees	51389	64		
Maintenance of Prisoners in Jails	2287	14		
Tools Lost	1634	11		
Value of Prison Labour	16212	6		
Refund of Civil Hospital expenses, &c....	24759	92		
Passage Money of Immigrant Coolies	8821	75		
Cost of Police within the Municipalities	109076	59		
Medical Aid Fund	82383	82		
Collections at Cemeteries	4021	38		
Storage of Gunpowder	3608	91		
Assessment Tax	141	6		
Sundries	33948	35		
			387380	37
Electric Telegraph	—		53628	60
Miscellaneous Receipts.				
Pioneer Pension Contributions	5351	8		
Overpayments recovered	172858	31		
Subscription to Widows' Fund	567	77		
Unclaimed Deposits	27865	2		
Sundries	161888	90¼		
			368531	8¼
Interest.				
On Public Funds invested	124211	98		
On Arrears of Revenue	9555	37		
On Loan Board Funds	19687	20		
			154454	55
Pearl Fishery.				
Sale of Rent	—		3971	32
Special Receipts.				
Fees for Title-deeds	6383	26		
Sundries	12	64		
			6395	90
Railway Receipts	—		2692595	44
Total ...	—		12682548	78¾

Ceylon Government Railways.

Revenue for 1886—

	R.	c.
Main Line	1705827	85
Matale Line	79637	94
Coast Line	250423	57
Nawalapitiya Line	265890	76
Nanu-oya Line	390815	72
Total ...	2692595	84

Expenditure for 1886—

	R.	c.
Main Line	764823	72
Matale Line	95551	92
Coast Line	198102	17
Nawalapitiya Line	145102	21
Nanu-oya Line	249671	69
Total .	1453251	71

Expenditure on Drafts from Balances.

	R.	c.	R.	c.
Works and Buildings.				
New Works and Buildings	30364	14		
Repairs	113	50		
			30477	64
Roads, Streets, and Bridges.				
New Roads, and Improvements, &c., to Roads	61734	86		
Maintenance of Bridges	1090	52		
Irrigation Works	73689	89		
Miscellaneous	660	87		
			137176	14
Total ...	—		167653	78

II.—DETAILED STATEMENT

	Salaries. Fixed.		Salaries. Provisional.		Allowances.		Office Contingencies.		Total.	
Civil.	R	c.	R.	c	R.	c.	R.	c.	R.	c.
His Excellency the Governor ...	80221	65	14708	56	—		1669	27	96599	48
Secretariat ...	106201	41	17787	96	—		59979	34	183968	71
Treasury ...	30299	99	6058	69	—		3179	99	39538	67
Audit Office ...	3645[illegible]	0	17592	63	—		4099	97	58142	60
Directors, Widows' Pension Fund ..	—		800	0	—		300	0	1100	0
Provincial Agencies.										
Western Province ...	88398	45	52913	9	—		3976	51	145288	5
North-Western Province ...	56167	14	19739	93	390	0	1311	72	77608	79
Southern do ...	77373	57	23324	23	277	50	1901	86	102877	16
Eastern do. ...	49899	38	13510	2	—		924	61	64334	1
Northern do. ...	62609	98	29136	93	—		2320	16	94067	7
Central do. ...	72032	76	36161	65	—		2185	55	110379	96
Uva do. ..	20578	12	9207	8	—		1164	64	30949	84
North-Central do ...	15882	31	21991	38	—		735	84	38609	53
Public Works Department ...	160747	0	123635	76	1640	0	2685	52	288708	28
Survey Department ...	67599	99	193001	60	456	23	—		261057	82
Customs Department.										
Western and North Western Provinces...	55936	35	26559	44	500	0	6955	3	83950	82
Southern Province ...	13989	27	2448	99	—		1463	65	17901	91
Eastern do. ...	6290	0	1217	69	—		403	40	7911	9
Northern do. ..	18520	0	2748	12	24	30	2409	75	23702	17
Harbour Department										
Master Attendant, Colombo ..	6475	0	30777	7	2257	74	196	15	39705	96
Master Attendant, Galle	5490	0	8851	74	—		375	25	14716	99
Master Attendant, Trincomalee	400	0	6092	0	—		307	42	6799	42
Master Attendant, Batticaloa ..	—		480	0	—		—		480	0
Postal-Telegraph Department	43823	52	162308	17	1600	0	—		207731	69
Director, Botanic Gardens ..	7338	14	10977	22	—		3121	27	21436	63
Director, Colombo Museum .	—		11036	45	—		8643	66	19680	11
Agent, Colonial Steamer ...	—		23122	51	4302	33	—		27424	84
Judicial.										
Supreme Court.										
Chief Justice	27699	96	—		—		—		27699	96
Senior and Junior Puisne Justices ...	39600	0	—		—		—		39600	0
Registrar	21152	74	780	0	—		416	33	22349	7
Attorney and Solicitor-Generals .	53305	81	14736	90	—		408	2	68450	73
District Courts										
Western Province										
Colombo . ..	21097	77	3800	0	1144	50	147	35	26189	62
Kalutara ...	13429	36	3035	85	100	0	116	85	16682	6
Kegalla ..	8384	63	2396	67	—		52	34	10833	64
Negombo	9740	0	2320	0	—		80	90	12140	90
Ratnapura	9813	86	2668	26	—		71	22	12553	34
North-Western Province.										
Chilaw	8790	0	1670	0	—		35	97	10495	97
Kurunegala	13034	48	3241	41	—		73	58	16349	47
Southern Province.										
Galle	18805	15	3552	36	—		186	57	22544	8
Matara	10270	0	2170	0	—		48	58	12488	58
Tangalla	10096	45	2046	29	—		12	47	12155	21
Eastern Province.										
Batticaloa	11684	45	2738	77	—		64	34	14487	56
Trincomalee	3314	99	145	0	—		3	75	3463	74
Northern Province.										
Jaffna	14412	65	2536	55	—		104	0	17053	20
Mannar	1356	13	429	46	—		22	88	1808	47
Mullaittivu	800	0	70	0	—		89	35	959	35
Vavuniya-Vilankulam ...	—		600	0	—		3	72	603	72
Central Province.										
Kandy	20281	42	4492	36	—		101	13	24874	91
Province of Uva.										
Badulla	11287	16	1406	45	—		91	81	12784	92
North-Central Province.										
Anuradhapura	2175	46	142	74	—		43	37	2361	57
Carried over ...	1413256	50	915167	98	12692	60	112484	59	2453601	67

OF EXPENDITURE FOR 1886.

	Salaries. Fixed.	Salaries. Provisional.	Allowances.	Office Contingencies.	Total.
	R. c.	R. c.	R. c.	R. c.	R. c.
Brought forward ...	1413256 50	915167 98	12692 60	112484 59	2453601 67
Courts of Requests and Police Courts.					
Western Province.					
Avisawella and Pasyala	5520 69	1591 91	—	90 0	7202 60
Colombo Police Court ...	9902 58	1566 62	—	372 31	11841 51
Colombo Court of Requests ...	10850 0	2060 9	—	38 98	12949 7
Kalutara	—	6375 56	—	79 47	6455 3
Panadure	6340 0	1500 0	—	81 23	7921 23
North-Western Province.					
Kalpitiya	7057 64	1100 0	—	50 0	8207 64
Kurunegala	2340 0	1940 0	—	30 0	4310 0
Puttalam and Marawila ...	—	500 0	—	58 72	558 72
Southern Province.					
Balapitimodara	6753 0	669 38	—	87 93	7510 31
Galle	9322 65	1983 23	—	213 55	11519 43
Hambantota	1020 0	—	—	6 36	1026 36
Matara	5140 0	2483 30	—	107 60	7730 90
Northern Province.					
Jaffna	6470 0	1500 0	—	163 47	8133 47
Kayts	5570 0	320 0	—	93 52	5983 52
Point Pedro	5920 0	2272 75	—	106 60	8299 35
Central Province.					
Dimbula and Dikoya	—	—	—	—	—
Galagedara	6560 0	380 0	—	31 35	6971 35
Gampola and Pussellawa ...	6379 60	680 0	—	64 75	7124 35
Hatton	—	5965 0	—	306 56	6271 56
Kandy	11499 80	1719 88	—	139 91	13359 59
Matale and Dambulla... ...	6312 9	920 0	—	49 18	7281 27
Nuwara Eliya	1200 0	810 0	—	65 22	2075 22
Panwila and Urugala... ...	4380 84	138 36	—	21 74	4540 94
Province of Uva.					
Haldummulla	5519 95½	700 50½	—	27 10	6247 56
Registration Department ...	56566 92	19119 48	36060 75	8158 80	119905 95
Fiscals.					
Western Province	27218 88	10519 0	1110 0	901 93	39749 81
North-Western Province ...	6060 85	5178 92	240 0	171 79	11651 56
Southern do. ...	11380 0	7415 3	—	257 59	19052 62
Eastern do. ...	4540 0	930 0	—	83 19	5553 19
Northern do. ...	10379 32	5640 0	—	235 40	16254 72
Central do. ...	14936 67	7820 90	—	186 22	22943 79
Uva do. ...	1680 0	1650 0	—	7 50	3337 50
North-Central do. ...	904 19	710 0	—	93 56	1707 75
Loan Board	3300 0	—	360 0	105 50	3765 50
Ecclesiastical Establishments ...	82238 3	1690 0	8057 4	—	91985 7
Public Instruction	26749 93	171796 13	—	—	198546 6
Medical Department	83622 31	117626 49	13107 71	7225 16	221581 70
Police Department	23774 44	428132 15	2346 72	—	454253 31
Prisons Department.					
Inspector-General of Prisons ...	10326 66	5250 0	—	—	15576 66
Convict Establishment ...	12839 83	41136 40	—	—	53976 23
Colonial Store	26221 92	5852 30	—	—	32074 22
Ceylon Government Railways ...	—	529723 30	2615 57	—	532338 87
Crown Agents in London ...	—	4265 98	1338 33	—	5604 31
Grain Commissioners	—	14400 0	—	—	14400 0
Total of Establishments ...	1940055 29½	2330200 64½	77928 75	132196 78	4481381 47

Services, exclusive of Establishments.	R.	c.	R.	c.
Brought forward ...	—		4481381	47
PENSIONS AND RETIRED ALLOWANCES.				
Paid in the Colony	221784	47		
Paid by the Crown Agents in London	433261	99		
Paid by the Government and Agents in India	34012	28		
REVENUE SERVICE.			689058	74
Salt	112098	32		
Fish Curing	2581	23		
Grain	55323	54		
Pearl Fishery	10619	24		
Timber	150491	21		
Cinnamon	1178	13		
Assessment	6022	52		
Botanic Gardens	15769	98		
Civil, Criminal, and Revenue Law Expenses	7197	20		
Stamps	14829	43		
Commission on collection of Hospital Bills	342	92		
Land Sales	94224	46		
Water Rates	362	29		
Licenses	957	76		
Tolls...	5670	73		
Stationery	7131	57		
ADMINISTRATION OF JUSTICE.			484800	53
Agents of Provinces	49108	0		
Registrar, Supreme Court	24324	68		
Attorney General and Solicitor-General	5928	56		
District and Police Courts	18621	33		
Fiscals	71718	3		
ECCLESIASTICAL			169700	60
CHARITABLE ALLOWANCES.	—		3144	62
Agent, Western Province	20139	48		
North-Western Province	1982	50		
Southern do.	10831	50		
Eastern do.	4228	77		
Northern do.	7469	27		
Central do.	3629	75		
Uva do.	523	70		
North-Central do.	138	0		
EDUCATION			48942	97
HOSPITALS AND SANITATION.	—		248770	39
Agent, Western Province	3698	10		
North-Western Province	314	75		
Southern do.	2677	50		
Eastern do.	1	50		
Northern do.	8734	73		
Central do.	2884	9		
Uva do.	51	50		
North-Central do.	33	34		
Principal Civil Medical Officer and Inspector-General of Hospitals ..	454469	26		
Inspector-General of Police	3957	4		
POLICE SERVICE.			476821	81
Inspector-General of Police	—		116801	18
PRISON SERVICE.				
Agent, Western Province	57995	49		
North-Western Province	25454	67		
Southern do.	49340	39		
Eastern do.	10408	56		
Northern do.	25193	96		
Central do.	57695	84		
Uva do.	10925	28		
North-Central do.	11383	75		
Superintendent of Convict Establishments	180069	69		
Inspector-General of Prisons	3901	0		
RENT.			432368	63
Agents of Provinces	300	0		
Surveyor-General	978	72		
Collector of Customs	—			
Registrar-General	1150	0		
Inspector-General of Prisons	480	0		
TRANSPORT.			2908	72
His Excellency the Governor	6628	61		
Secretariat	1132	61		
Treasury	13453	1		
Audit Office	1709	56		
Carried over ...	22923	89	9144699	66

	R.	c.	R.	c.
TRANSPORT—*contd.* Brought forward ...	22923	89	7144699	66
Agent, Western Province	8153	65		
North-Western Province	5172	85		
Southern do.	7553	78		
Eastern do.	5497	86		
Northern do.	6156	20		
Central do.	6494	53		
Uva do.	3706	55		
North-Central do.	5534	15		
Survey Department	17440	47		
Customs Department	294	81		
Botanic Gardens	2110	35		
Colombo Museum	1973	3		
Registrar-General	1513	75		
Loan Board	—			
			94525	77
CONVEYANCE OF MAILS	—		292288	90
WORKS AND BUILDINGS.				
New Works and Buildings	98981	92		
Alterations and Additions	44863	75		
Repairs	103546	9		
			247391	76
ROADS, STREETS, AND BRIDGES.				
New Roads and Improvements, &c., of Roads	194900	95		
Maintenance of Roads...	610102	75		
New Bridges	113282	77		
Repairs and renewals of Bridges	46121	76		
Maintenance of Inland Navigation	18515	72		
Irrigation Works, including Maintenance	289372	49		
Departmental Charges	122575	90		
Miscellaneous	38528	23		
			1433400	57
MISCELLANEOUS				
Colonial Secretary	61925	28		
Treasurer	63912	91		
Agent, Western Province	4082	60		
North-Western Province	3636	19		
Southern do.	1355	68		
Eastern do.	1323	50		
Northern do.	5351	83		
Central do.	7861	77		
Uva do.	1580	32		
North-Central do.	3433	30		
Surveyor-General	9369	70		
Master Attendant	23046	98		
Botanic Gardens	2205	0		
Crown Agents	18844	41		
Government and Agents in India	610	32		
			208539	79
INTEREST.				
On Dutch Kredit Brieven	1989	63		
On Breakwater Loans	527758	28		
On Waterworks Loans	198639	76		
On Widows' and Orphans' Pension Fund	8611	87		
On Advances	7039	85		
			744039	39
COLONIAL STORE	—		29277	84
MILITARY EXPENDITURE.				
Contribution to Imperial Government	600000	0		
Volunteer Corps	29193	42		
			629193	42
GOVERNMENT VESSELS	—		59380	33
REFUND OF DUTIES DRAWBACKS, &c.	—		91559	32
LANDS TAKEN FOR GOVERNMENT PURPOSES	—		12491	9
IMMIGRATION	—		77350	30
RAILWAY SERVICES.				
Interest, Matale Line	193262	76		
Interest, Nanu-oya Line	702480	64		
Maintenance and Working Expenses	920912	84		
			1816656	24
EXCHANGE	—		122272	80
	Total Expenditure		13013067	18
	Total Revenue ...		12682548	78¾
Excess of Expenditure over Revenue ...			330518	39¼

Audit Office,
Colombo, May 31, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

III.—COMPARATIVE STATEMENT OF

	Revenue of 1885.		Revenue of 1886.		Increase.		Decrease.	
	R.	c.	R.	c.	R.	c.	R.	c.
1.—ARREARS OF REVENUE.								
Land Revenue - -	34069	37	27607	52	—		6461	85
Rents - - -	23103	96	16884	23	—		6219	73
Licenses - - -	144307	88	114962	42	—		29345	46
Taxes - - -	21497	88	14577	17	—		6920	71
	222979	9	174031	34	—		48947	75
2.—CUSTOMS.								
Imports - - -	2802043	38	2836066	8	34022	70	—	
Warehouse Rent - -	5050	54	5707	97	657	43	—	
Plumbago - - -	48946	25	60390	40	11444	15	—	
Sundries - - -	1007	62	1118	3	110	41	—	
	2857047	79	2903282	48	46234	69	—	
3.—PORT AND HARBOUR DUES.								
Port Clearances - -	33862	62	30436	22	—		3426	40
Boats and Moorings - -	1365	75	1800	25	434	50	—	
Pilotage - - -	42237	50	42833	50	596	0	—	
Colombo Harbour Dues - -	393720	27	396113	19	2392	92	—	
Rent of Reclamation Grounds -	6468	99	4275	84	—		2193	15
Sundries - - -	4433	49	4241	1	—		192	48
	482088	62	479700	1	3423	42	5812	3
4.—LAND SALES.								
Crown Lands - - -	348935	3½	355498	31½	6563	28	—	
5.—LAND REVENUE.								
Paddy - - -	947126	27	989783	21	42656	94	—	
Fine Grain - - -	61552	76	64500	35	2947	59	—	
Gardens - - -	15315	2	8761	35	—		6553	67
Tythes redeemed - -	1838	90	3182	11	1343	21	—	
Rent of Lands - -	14662	97	12706	58	—		1956	39
Licenses on Plumbago, &c. - -	1060	68	2069	37	1008	69	—	
Sundries - - -	1881	61	2008	32	126	71	—	
	1043138	21	1083011	29	48083	14	8510	6
6.—RENTS, EXCLUSIVE OF LANDS.								
Bridges, Canals, &c. - -	301908	79	289128	7	—		12780	72
Government Buildings and Houses -	33951	86	32272	63	—		1679	23
	335860	65	321400	70	—		14459	95
7.—LICENSES.								
Arrack, Rum, and Toddy - -	1363950	92	1307028	63	—		56922	29
Stills - - -	16100	0	12200	0	—		3900	0
Wholesale Dealers in Arrack and Rum -	2300	0	2400	0	100	0	—	
Retail of Salt - -	44000	0	44000	0	—		—	
Chanks, &c. - - -	4404	59	6428	32	2023	73	—	
Opium - -	3105	0	2500	0	—		605	0
Royalty on Elephants - -	1700	0	5520	0	3820	0	—	
	1435560	51	1380076	95	5943	73	61427	29
8.—STAMPS.								
Judicial, Revenue, and Postage -	1040851	17½	1036276	60	—		4574	57½
Composition Duty - -	9742	24	11171	86	1429	62	—	
	1050593	41½	1047448	46	1429	62	4574	57½
9.—TAXES.								
Assessment on Houses -	37692	83	38947	39	1254	56	—	
10.—POSTAGE.								
On Letters, &c. - -	18764	15½	14443	23	—		4320	92½
11.—FINES AND FORFEITURES.								
Supreme, District, and Police Courts -	50675	88	54044	72	3368	84	—	
Government Agents - -	941	28	1287	78	346	50	—	
Other Departments - -	4897	17	8964	79	4067	62	—	
	56514	33	64297	29	7782	96	—	
12.—GOVERNMENT VESSELS -	44768	97	59754	94	14985	97	—	
Carried over -	7934243	60½	7921892	39½	135701	37	148052	58

THE REVENUE OF 1885 AND 1886.

Cause of Increase or Decrease.

The amount of recoverable arrears outstanding on January 1st, 1886, was smaller than on January 1, 1885; hence the decrease.

The increase under the sub-heads "Imports" and "Warehouse Rent" is due to a larger importation of cotton goods, haberdashery, kerosine oil, spirits, cordials, and other goods, which more than counterbalanced the decrease on imported grain. The increase under the sub-head "Plumbago" is due to a larger exportation of that mineral.

"Port Clearances" show a decrease, due to the smaller number of vessels which called at the out-ports consequent on a decrease in grain imports.

"Boats and Moorings," "Pilotage," and "Colombo Harbour Dues."—The increase under these sub-heads is due to a larger tonnage of vessels having called at the port of Colombo.

This decrease is only apparent, and is caused by the rent for the second half of 1884 having been brought to account in 1885.

The increase is to be attributed to the extensive sales of land in the Kaloni valley district for tea-planting. In other parts of the Island there was a decrease under this head.

The increase under "Paddy" is attributable partly to seasonable weather, and consequent good crops, in the North-Western and Northern Provinces, and to the introduction of paddy commutation under the Grain Tax Ordinance of 1878 into the Eastern Province. The increase under "Fine Grain" is also due to better crops in the Northern Province.

Greater activity in the market has apparently contributed to a larger revenue under this sub-head.

The sale of Toll Rents for 1886 realised a smaller return than in 1885.

The decrease in "Arrack" is due to the sale of licenses having fetched lower prices than in the preceding year; and under the sub-heads "Stills" and "Opium," to a smaller demand for licenses, apparently owing to diminished consumption.

An improvement in the chank trade has helped to augment the receipts under this sub-head.

A larger demand for licenses has contributed to swell the receipts under the sub-head "Royalty on Elephants."

The collections on account of stamps sold in 1885 includes R6,048·42, value of stamp defalcation of 1879. When this sum is deducted from the receipts of 1885, the collections for 1886 compare favourably with those of the preceding year.

Prompt recovery of amount due accounts for the increase.

Receipts under this head are fluctuating.

The increase in fines imposed by Judicial Officers may be attributed to greater facilities afforded for the punishment of crimes under the Penal Code. Departmental fines are casual and fluctuating.

The Colonial Steamer worked uninterruptedly during the year, and required no repairs; hence the increase.

	Revenue of 1885.		Revenue of 1886.		Increase.		Decrease.	
	R.	c.	R.	c.	R.	c.	R.	c.
Brought forward -	7934243	60½	7921892	39½	135701	37	148052	58
13.—SALE OF GOVERNMENT PROPERTY.								
Salt - - -	822666	79	848142	85	25476	6	—	
Arrack and Rum - -	328	20	214	76	—		113	44
Colonial Stores - -	6516	42	5433	97	—		1082	45
Timber - - -	252574	9	229281	28	—		23292	81
Weights and Measures - -	32	21	40	14	7	93	—	
Unserviceable Articles - -	2949	71	3161	5	211	34	—	
Produce of Botanic Gardens -	2694	31	3290	11	595	80	—	
Crops growing on Crown Lands -	1852	99	2382	22	529	23	—	
Sundries - - -	1734	3	1752	75	18	72	—	
	1091348	75	1093699	13	26839	8	24488	70
14.—REIMBURSEMENTS.								
Hospital Stoppages - -	4255	3	1073	17	—		3181	86
Government Gazette -	6192	83	9867	31	3674	48	—	
School Fees, &c. - -	21721	51	20763	63	—		957	88
Irrigation Works - -	21027	51½	17391	53	—		3635	98½
Survey Fees - -	67973	81	51389	64	—		16584	17
Maintenance of Prisoners in Jails -	2353	48	2287	14	—		66	34
Tools lost - -	1157	66	1634	11	476	45	—	
Value of Prison Labour - -	22024	95	16212	6	—		5812	89
Refund of Civil Hospital Expenses, &c.-	27419	47	24759	92	—		2659	55
Passage Money of Immigrant Coolies -	10556	0	8821	75	—		1734	25
Cost of Police within Municipalities, &c.	127193	7	109076	59	—		18116	48
Medical Aid Fund - -	86847	44	82383	82	—		4463	62
Collections at Cemeteries -	3742	10	4021	38	279	28	—	
Storage of Gunpowder - -	1171	86	3608	91	2437	5	—	
Assessment Tax - -	1064	86	141	6	—		923	80
Sundries - - -	39272	3	33948	35	—		5323	68
	443973	61½	387380	37	6867	26	63460	50½
15.—ELECTRIC TELEGRAPH -	55664	49	53628	60	—		2035	89
16.—MISCELLANEOUS RECEIPTS.								
Payments on account of Deficiency of Troops - - -	146833	33	—		—		146833	33
Pioneer Pension Contributions -	4904	16	5351	8	446	92	—	
Overpayments recovered - -	160334	22½	172858	31	12524	8½	—	
Subscription to Widows' Pension Fund	247	21	567	77	320	56	—	
Unclaimed Deposits - -	1204	94	27865	2	26660	8	—	
Sundries - - -	38017	96	161888	90¼	123870	94¼	—	
	351541	82½	368531	8¼	163822	58¾	146833	33
17.—INTEREST.								
On Public Funds Invested- -	90979	40	124211	98	33232	58	—	
On Arrears of Revenue - -	32021	4	10555	37	—		21465	67
On Loan Board Funds - -	22394	40	19687	20	—		2707	20
	145394	84	154454	55	33232	58	24172	87
18.—PEARL FISHERY - -	440	28	3971	32	3531	4	—	
19.—SPECIAL RECEIPTS.								
Fees for Title-deeds - -	10326	55	6383	26	—		3943	29
Sundries - - -	1	50	12	64	11	14	—	
	10328	5	6395	90	11	14	3943	29
20.—RAILWAY RECEIPTS -	2617928	25	2692595	44	74667	19	—	
Total -	12650863	70½	12682548	78¾	444672	24¾	412987	16½
				Deduct Decrease -	412987	16½		
				Net Increase -	31685	8¼		

Cause of Increase or Decrease.

Increase due to a larger quantity of salt having been sold during the year. The revenue from this source fluctuates.

Decrease due to a smaller supply of timber having been offered for sale.

The increase under *Government Gazette* is due to receipts for forms, &c., supplied to Provincial Road Committees. The decrease under "Irrigation Works" is partly due to the water-rate for 1886 for the Medayawa tank, in the North-Western Province, having been waived owing to a breach in the tank, and also to smaller collections made in the Southern Province. The falling off in "Survey Fees" is due to the sales of small allotments of Crown land having been fewer than in the preceding year. The falling off in "Value of Prison Labour" is owing to the withdrawal of prisoners from the Breakwater Works on their completion. The decrease in "Passage Money of Immigrant Coolies" is due to a falling off in the arrivals and departures of coolies. The receipts in 1885 under "Cost of Police within Municipalities, &c.," includes also the arrears of 1884 collected in that year; hence the apparent decrease in 1886. The decrease under "Medical Aid Fund" is due to a falling off in the receipts from exports, chiefly coffee. The other items are casual and fluctuating.

The Colony now pays a fixed sum per annum on account of military protection, irrespective of the number of troops in the Island.

Increase due to the larger amount of unclaimed deposits transferred to revenue.

Increase due to investment of a further portion of the currency reserve.
Greater promptitude in the payment of instalments due by renters.

Increase due to the high price realised by sale of the right of fishing in the Tamblegam Bay, consequent on the prospect of successful fishing.

Decrease due to a reduction in the number of small allotments offered for sale in 1886.

Increase due to the opening of the extension to Nanu-oya in May, 1885, and to the development of tea enterprise.

Audit Office,
Colombo, May 31, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

IV.—COMPARATIVE STATEMENT OF THE

	ESTABLISHMENTS, INCLUDING FIXED AND PROVISIONAL SALARIES, ALLOWANCES, AND OFFICE CONTINGENCIES.	Expenditure of 1885.		Expenditure of 1886.		Increase.		Decrease.	
	Civil.	R.	c.	R.	c.	R.	c.	R.	c.
1	His Excellency the Governor -	96494	18	96599	48	105	30	—	
2	Secretariat - -	168753	28	183968	71	15215	43	—	
3	Treasury - -	38596	19	39538	67	942	48	—	
4	Audit Office - -	57473	75	58142	60	668	85	—	
5	Directors, Widows' and Orphans' Pension Fund - -	970	80	1100	0	129	20	—	
	PROVINCIAL AGENCIES.								
6	Western - -	142155	37	145288	5	3132	68	—	
7	North-Western - -	78152	57	77608	79	—		543	78
8	Southern - -	103624	93	102877	16	—		747	77
9	Eastern - -	64481	34	64334	1	—		147	33
10	Northern - -	94311	19	94067	7	—		244	12
11	Central - -	139510	18	110379	96	—		29130	22
12	Uva - -	—		30949	84	30949	84	—	
13	North-Central - -	38031	69	38609	53	577	84	—	
14	Public Works Department -	279002	89	288708	28	9705	39	—	
15	Survey Department - -	253269	31	261057	82	7788	51	—	
16	Customs Department - -	131662	78	133465	99	1803	21	—	
17	Harbour Department - -	62163	9	61702	37	—		460	72
18	Postal Telegraph Department -	203499	95	207731	69	4231	74	—	
19	Royal Botanic Gardens -	21603	5	21436	63	—		166	42
20	Colombo Museum -	19239	54	19680	11	440	57	—	
21	Agent, Colonial ss. Serendib -	28222	15	27424	84	—		797	31
	Total, Civil Establishments -	2021218	23	2064671	60	75691	4	32237	67
	Judicial.								
22	Supreme Court Judges - -	62887	35	67299	96	4412	61	—	
23	Registry of the Supreme Court -	21969	41	22349	7	379	66	—	
24	Attorney-General and Solicitor-General -	66969	90	68450	73	1480	83	—	
	DISTRICT COURTS, POLICE COURTS, AND COURTS OF REQUESTS.								
25	Western - -	124577	8	124769	0	191	92	—	
26	North-Western - -	38711	31	39921	80	1210	49	—	
27	Southern - -	71452	52	74974	87	3522	35	—	
28	Eastern - -	18826	64	17951	30	—		875	34
29	Northern - -	43425	38	42841	8	—		584	30
30	Central -	93310	69	72499	19	—		20811	50
31	Uva - -	—		19032	48	—		—	
32	North-Central - -	2435	12	2361	57	—		73	55
	Registration Department - -	127316	4	119905	95	—		7410	9
	FISCALS.								
33	Western -	39902	17	39749	81	—		152	36
34	North-Western - -	11721	57	11651	56	—		70	1
35	Southern - -	19267	50	19052	62	—		214	88
36	Eastern - -	5524	71	5553	19	28	48	—	
37	Northern - -	16358	52	16254	72	—		103	80
38	Central - -	27170	16	22943	79	—		4226	37
39	Uva - -	—		3337	50	3337	50	—	
40	North-Central - -	1723	17	1707	75	—		15	42
	Loan Board - - -	3603	15	3765	50	162	35	—	
	Total, Judicial Establishments -	797152	39	796373	44	33758	67	34537	62
41	Ecclesiastical Establishments -	99730	51	91985	7	—		7745	44
42	Public Instruction - -	197653	35	198546	6	892	71	—	
43	Medical Department - -	216195	22	221581	70	5386	48	—	
44	Police Department - -	458149	92	454253	31	—		3896	61
45	Prisons Department - -	7900	0	15576	66	7676	66	—	
46	Convict Establishment - -	56043	5	53976	23	—		2066	82
47	Colonial Store - -	31811	76	32074	22	262	46	—	
48	Railway Department - -	512092	38	532338	87	20246	49	—	
49	Crown Agents, London - -	7732	29	5604	31	—		2127	98
50	Grain Commissioners - -	—		14400	0	14400	0	—	
	Total, Establishments -	4405679	10	4481381	47	158314	51	82612	14

EXPENDITURE OF 1885 AND 1886.

Cause of Increase or Decrease.

In 1886 the Badulla district was separated from the Central Province and created a distinct province under the designation of the Province of Uva. The decrease in the Central Province is therefore only apparent, and is counterbalanced by the increase in the Province of Uva.

This increase is accounted for by the appointment of a Provincial Engineer for the North-Central Province and by an increase in the staff of officers.

Increase in the staff of surveyors accounts for this increase.

Employment of four additional Telegraph Masters and increment to Superintendent account for this increase.

This increase and decrease are only apparent, and are caused by the separation of the Badulla district from the Central Province and of its creation into a separate province.

Same remark as the foregoing.

Increase due chiefly to additional staff taken on, consequent on the completion of the extension to Nanu-oya in May, 1885.

In previous years this expenditure was brought to account under the head "Miscellaneous Services."

		Expenditure of 1885.		Expenditure of 1886.		Increase.		Decrease.	
	SERVICES, EXCLUSIVE OF ESTABLISHMENTS.	R.	c.	R.	c.	R.	c.	R.	c.
49	Pensions and Retired Allowances -	645102	74	689058	74	43956	0	—	
50	Revenue Services - -	505962	55	484800	53	—		21162	2
51	Administration of Justice - -	181779	4	169700	60	—		12078	44
52	Ecclesiastical - -	3119	58	3144	62	25	4	—	
53	Charitable Allowances - -	51358	64	48942	97	—		2415	67
54	Education - -	237337	52	248770	39	11432	87	—	
55	Hospitals and Sanitation - -	462785	50	476821	81	14036	31	—	
56	Police Services - -	104467	44	116801	18	12333	74	—	
57	Prison Services - -	426053	80	432368	63	6314	83	—	
58	Rent - -	2704	87	2908	72	203	85	—	
59	Transport - -	91375	48	94525	77	3150	29	—	
60	Conveyance of Mails and Postal-Telegraph Service - -	291607	1	292288	90	681	89	—	
61	Works and Buildings - -	247563	94	247391	76	—		172	18
62	Roads, Streets, and Bridges -	1323838	78	1433400	57	109561	79	—	
63	Miscellaneous Services - -	279601	81	208539	79	—		71062	1
64	Interest - - -	609534	30	744039	39	134505	9	—	
65	Colonial Store - -	27794	32	29277	84	1483	52	—	
66	Contribution towards Military Expenditure - - -	631945	73	629193	42	—		2752	31
67	Government Vessels -	92658	22	59380	33	—		33277	89
68	Refund of Duties, Drawbacks, &c. -	53522	1	91559	32	38037	31	—	
69	Lands taken for Government purposes -	5599	53	12491	9	6891	56	—	
70	Immigration - - -	80291	88	77350	30	—		2941	58
71	Railway Services - -	1740647	82	1816656	24	76008	42	—	
72	Exchange - -	108875	67	122272	80	13397	13	—	
	Total, Services exclusive of Establishments -	8205528	18	8531685	71	472019	64	145862	11
	RECAPITULATION.								
	Establishments - -	4405679	10	4481381	47	158314	51	82612	14
	Services exclusive of Establishments -	8205528	18	8531685	71	472019	64	145862	11
	TOTAL -	12611207	28	13013067	18	630334	15	228474	25
	Deduct Decrease -	—		—		228474	25	—	
	Net Increase -	—		—		401859	90	—	

Cause of Increase or Decrease.

Increase due to depreciation in the value of silver and to pensions granted in the year.
This reduction is chiefly in the expenditure on manufacture of salt.
The reduction in the expenditure under this head is due apparently to the operation of the Penal Code.

Relief to destitute villagers did not become necessary to the same extent as in 1885.
Increase in the number of grant schools, and increased earnings of grant schools, together with increase in the payment results to Government teachers and other causes swelled the expenditure under this head.
Increase due to prevalence of epedimic diseases in some parts of the Island, and also to the establishment of five additional outdoor hospitals.
Increase due partly to expenditure in the purchase of uniform and partly to excess credits to be surcharged.
Increase due to the larger number of prisoners incarcerated.
Increase due to rent paid for the office of the Inspector-General of Prisons.
Increase chiefly due to a larger expenditure for travelling having been incurred by the Governor than in the preceding year.

Increase due to larger expenditure on new roads and bridges.
The expenditure for 1885 includes certain items which did not occur in 1886, such as expenses on account of currency notes, &c., and this explains the decrease in the expenditure for 1886.
Increase due to the depreciation in the value of silver, interest being paid in England in sterling.

No repairs effected in 1886; hence the decrease.
This is a fluctuating item of expenditure.
The following lands have been acquired for Government purposes, viz., land below Queen's Cottage, Nuwara Elliya, boutiques near hospital at Vavuniya-Vilankulam, land from Mariawatte estate for forest reservation, for Gampola cemetery, and for Mahara quarry.
Reduction in the number of arrivals and departures of immigrant coolies.
Increase due to depreciation in the value of silver, interest on Railway Loan brought to account under this head being paid in England in sterling.
Depreciation in the value of silver.

Audit Office,
Colombo, May 31, 1887

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

V.—STATEMENT OF ASSETS AND LIABILITIES OF THE

ASSETS.	January 1, 1886. R.	c.	January 1, 1887. R.	c.
To Cash in the hands of the Crown Agents	163352	18	293357	54
Cash in the General Treasury and District Chests	5813551	75	5430671	10
Advances to Currency Commissioners	4192165	0	5012165	0
Do. for redemption of O. B. C. notes	625152	50	156288	14
Do. to Public Works Department	151940	77	326591	67
Do on account of Breakwater Works	55544	32	—	
Do. to Railway Department	28322	13	38277	33
Do. on account of Board of Trade	20969	63	13121	29
Do. on account of General Stores	710748	14	760767	23
Do. do. Egyptian Exiles	4759	70	4489	45
Do. do. Volunteer Corps	6300	0	—	
Do. to Contractors, Colombo Waterworks	17000	0	8000	0
Other recoverable advances	65276	88	68483	53
Trustees of the Ceylon Savings Bank	4804	17	—	
Recoverable arrears of Revenue	243962	98	170756	64
Municipal Council, Kandy—Balance of Loan	246824	75	244165	72
Straits Government	36	55	766	8
Mauritius Government	78	62	12	50
Sums to be recovered by Crown Agents	7316	89	26380	69
Messrs. Nowell & Co.	27298	56	—	
Surcharges outstanding	100000	0	100000	0
	12485405	52	12654293	91

Audit Office,
Colombo, May 31, 1887.

VI.—COMPARATIVE STATEMENT OF ESTIMATED

	Estimated Revenue, 1886. R.	c.	Actual Revenue, 1886. R.	c.	Excess. R.	c.	Deficiency. R.	c.
Arrears of Revenue	300000	0	174031	34	—		125968	66
Customs	3000000	0	2903282	48	—		96717	52
Port and Harbour Dues	480000	0	479700	1	—		299	99
Land Sales	400000	0	355498	31½	—		44501	68½
Land Revenue	1000000	0	1083011	29	83011	29	—	
Rents, exclusive of Land	350000	0	321400	70	—		28599	30
Licenses	1450000	0	1380076	95	—		69923	5
Stamps	1060000	0	1047448	46	—		12551	54
Taxes	35000	0	38947	39	3947	39	—	
Postage	15000	0	14443	23	—		556	77
Fines, Forfeitures, and Fees of Court	45000	0	64297	29	19297	29	—	
Government Vessels	50000	0	59754	94	9754	94	—	
Sale of Government Property	1050000	0	1093699	13	43699	13	—	
Reimbursements	450000	0	387380	37	—		62619	63
Electric Telegraph	60000	0	53628	60	—		6371	40
Miscellaneous Receipts	200000	0	368531	8¼	168531	8¼	—	
Interest	160000	0	154454	55	—		5545	45
Pearl Fishery	400	0	3971	32	3571	32	—	
Special Receipts	12500	0	6395	90	—		6104	10
Railway Receipts	3000000	0	2692595	44	—		307404	56
	13117900	0	12682548	78¾	331812	44¼	767163	65½
			Deduct Increase				331812	44¼
			Net Decrease				425351	21¼

CEYLON GOVERNMENT ON JANUARY 1 OF 1886 AND 1887.

LIABILITIES.	January 1, 1886.		January 1, 1887.	
	R.	c.	R.	c.
By Deposits, Lapsed Loan Board	123329	79	129614	61
Do. Suitors, District Court	151920	22	107964	65
Do. Suitors, Court of Requests	49143	65	70566	66
Do. Breakwater account	258677	60	40114	40
Do. Railway permanent way materials	72487	99	36317	5
Do. Assessment on account of Grant-in-aid Roads	29709	33	35361	35
Do. Railway Construction Account	56231	6	56231	6
Do. Light Dues collections	2905	37	3920	91
Do. Nanu-oya Railway construction account	1643386	98	1346679	4
Do. Telegraph Receipts	37454	85	38698	82
Do. Colombo Waterworks	316124	3	60022	82
Do. Public Works	90049	49	89476	58
Do. Government balance in Oriental Bank	117171	43	234397	72
Do. Abatement on account of Widows' and Orphans' Fund	99931	8	188443	69
Do. Currency Notes Reserve Fund	2287023	19	3071203	71
Do. with Crown Agents	90	50	90	50
Currency Notes in circulation	4192165	0	5012165	0
Do. Depreciation Fund	214	86	1064	86
Crown Agents for temporary loans	388473	51	—	
Sums payable by the Crown Agents	6786	62	4009	79
Family Remittances outstanding	27365	85	28598	57
Drafts and Remittances	221877	50½	251836	31
Due to Government of India	175901	51	100162	40
Do. Agents, Calcutta	63	94	1938	21
Do. Agents, Bombay	823	81	57	44
Do. Agents, Madras	8222	65	1630	2
Unexpended balances of votes of preceding year brought forward for expenditure	236847	91	345246	52
Miscellaneous deposits	1073869	65½	958204	38
Amount due on a Bill drawn on the Colony by the Crown Agents	—		250000	0
Over-credit to Messrs. Nowell & Co. to be transferred to Nanu-oya Construction Account	—		23836	52
	11668279	38	12487853	59

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

AND ACTUAL REVENUE FOR 1886.

Cause of Excess or Deficiency.
Over-estimated, outstanding arrears having been smaller on January 1, 1886.
Over-estimated, though the receipts as compared with the preceding year are larger.
Over-estimated. The extent of land brought forward for sale was less than anticipated.
Under-estimated. The grain crop for the year was very good.
Over-estimated. Rents realised smaller returns.
Do. do.
Over-estimated.
Under-estimated.
Under-estimated.
Under-estimated. The working of the Colonial steamer was not interrupted by repairs.
Under-estimated. Increased sale of salt.
Over-estimated.
Over-estimated.
Under-estimated.
Over-estimated.
Under-estimated. The Tamblegam Bay fishery realised a larger sum than anticipated.
Over-estimated. Decrease in the number of allotments of land sold.
Over-estimated. Traffic receipts were partially affected by interruption to the Nanu-oya Extension, but the total receipts in 1886 is, however, in excess of 1885.

Audit Office,
Colombo, May 31, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

VII.—COMPARATIVE STATEMENT OF ESTIMATED

	HEADS OF SERVICE.	Estimated.		Actual		Increase.		Decrease.	
	ESTABLISHMENTS, INCLUDING FIXED AND PROVISIONAL SALARIES, ALLOWANCES, AND OFFICE CONTINGENCIES.								
	Civil.	R.	c.	R.	c.	R.	c.	R.	c.
1	His Excellency the Governor -	96741	98	96599	48	—		142	50
2	Secretariat - -	184831	29	183968	71	—		862	58
3	Treasury - -	39228	87	39538	67	309	80	—	
4	Audit Office - -	59160	92	58142	60	—		1018	32
5	Directors, Widows' and Orphans' Fund -	1100	0	1100	0	—		—	
	PROVINCIAL AGENCIES.								
6	Western - -	143935	0	145288	5	1353	5	—	
7	North-Western - -	78355	0	77608	79	—		746	21
8	Southern - -	103246	0	102877	16	—		368	84
9	Eastern - -	64947	56	64334	1	—		613	55
10	Northern - -	95600	0	94067	7	—		1532	93
11	Central - -	112122	0	110379	96	—		1742	4
12	Uva - -	32259	33	30949	84	—		1309	49
13	North-Central - -	38065	0	38609	53	544	53	—	
14	Public Works Department -	297715	25	288708	28	—		9006	97
15	Survey Department - -	267512	75	261057	82	—		6454	93
16	Customs Department - -	135442	25	133465	99	—		1976	26
17	Harbour Department - -	62974	83	61702	37	—		1272	46
18	Postal-Telegraph Department -	213928	0	207731	69	—		6196	31
19	Royal Botanic Gardens - -	21471	44	21436	63	—		34	81
20	Colombo Museum - -	19190	0	19680	11	490	11	—	
21	Agent, Colonial ss. Serendib -	27977	95	27424	84	—		553	11
	Total, Civil Establishments -	2095805	42	2064671	60	2697	49	33831	31
	Judicial.								
22	Supreme Court Judges - -	67300	0	67299	96	—		0	4
23	Registry of the Supreme Court -	22468	0	22349	7	—		118	93
24	Attorney-General and Solicitor-General	61502	0	68450	73	6948	73	—	
	DISTRICT COURTS, POLICE COURTS, AND COURTS OF REQUESTS.								
25	Western - -	125745	90	124769	0	—		976	90
26	North-Western - -	40128	73	39921	80	—		206	93
27	Southern - -	74038	24	74974	87	936	63	—	
28	Eastern - -	18172	50	17951	30	—		221	20
29	Northern - -	43680	58	42841	8	—		839	50
30	Central - -	74403	0	72499	19	—		1903	81
31	Uva - -	19026	0	19032	48	6	48	—	
32	North-Central - -	2490	0	2361	57	—		128	43
33	Registration Department - -	121769	15	119905	95	—		1863	20
	FISCALS.								
34	Western - -	39625	0	39749	81	124	81	—	
35	North-Western - -	11910	0	11651	56	—		258	44
36	Southern - -	19270	0	19052	62	—		217	38
37	Eastern - -	5570	0	5553	19	—		16	81
38	Northern - -	16335	0	16254	72	—		80	28
39	Central - -	25632	0	22943	79	—		2688	21
30	Uva - -	3400	0	3337	50	—		62	50
41	North-Central - -	1840	0	1707	75	—		132	25
42	Loan Board - -	3827	0	3765	50	—		61	50
	Total, Judicial Establishments -	798133	10	796373	44	8016	65	9776	31
43	Ecclesiastical Establishments -	95110	0	91985	7	—		3124	93
44	Public Instruction - -	205158	0	198546	6	—		6611	94
45	Medical Department - -	220995	66	221581	70	586	4	—	
46	Police Department - -	458338	0	454253	31	—		4084	69
47	Prisons Department - -	15566	66	15576	66	10	0	—	
48	Convict Establishment - -	53642	0	53976	23	334	23	—	
49	Colonial Store - -	32106	90	32074	22	—		32	68
40	Railway Department - -	564804	0	532338	87	—		32465	13
51	Crown Agents, London - -	5933	0	5604	31	—		328	69
52	Grain Commissioners - -	14400	0	14400	0	—		—	
	Total, Establishments -	4559992	74	4481381	47	11644	41	90255	68

AND ACTUAL EXPENDITURE FOR 1886.

Cause of Increase or Decrease.

The net savings in Establishments amount to R78,612·27. The principal decreases are in the votes taken for the Departments of Public Works, Survey, Postal-Telegraph, Public Instruction, and Railway, the amounts allowed not having been fully expended. The excesses over estimated expenditure are chiefly over-credits to be surcharged.

	HEADS OF SERVICE.	Estimated.		Actual.		Increase.		Decrease.	
	SERVICES, EXCLUSIVE OF ESTABLISHMENTS.	R.	c.	R.	c.	R.	c.	R.	c.
52	Pensions and Retired Allowances -	714880	99	689058	74	—		25822	25
53	Revenue Services - -	524029	33	484800	53	—		39228	80
54	Administration of Justice -	181729	64	169700	60	—		12029	4
55	Ecclesiastical - -	3190	0	3144	62	—		45	38
56	Charitable Allowances - -	50829	70	48942	97	—		1886	73
57	Education - -	248111	0	248770	39	659	39	—	
58	Hospitals and Sanitation - -	463184	7	476821	81	13637	74	—	
59	Police Services - -	114313	0	116801	18	2488	18	—	
60	Prison Services - -	422345	38	432368	63	10023	25	—	
61	Rent . - -	3420	0	2908	72	—		511	28
62	Transport - -	105541	11	94525	77	—		11015	34
63	Conveyance of Mails and Postal-Telegraph Services - -	289250	14	292288	90	3038	76	—	
64	Works and Buildings - -	325568	28	247391	76	—		78176	52
65	Roads, Streets, and Bridges -	1698263	32	1433400	57	—		264862	75
66	Miscellaneous - -	245546	42	208539	79	—		37006	63
67	Interest - -	687537	50	744039	39	56501	89	—	
68	Colonial Store - -	34499	0	29277	84	—		5221	16
69	Contribution towards Military Expenditure - -	631500	0	629193	42	—		2306	58
70	Government Vessels - -	55000	0	59380	33	4380	33	—	
71	Refund of Duties, Drawbacks, &c. -	92125	0	91559	32	—		565	68
72	Lands taken for Government Purposes-	12571	59	12491	9	—		80	50
73	Immigration - -	84200	0	77350	30	—		6849	70
74	Railway Services - -	1881455	84	1816656	24	—		64799	60
75	Exchange - -	124000	0	122272	80	—		1727	20
	Total, Services exclusive of Establishments -	8993091	31	8531685	71	90729	54	552135	14
	RECAPITULATION.								
	Establishments - -	4559992	74	4481381	47	—		78611	27
	Services exclusive of Establishments -	8993091	31	8531685	71	—		461405	60
	Total Expenditure -	13553084	5	13013067	18	—		540016	87

Cause of Increase or Decrease.

Over-estimated.
Over-estimated, and to reduction of expenditure on salt, the quantity manufactured having been smaller than in 1885.
Over-estimated.
do.
do.
Under-estimated.
The prevalence of epidemic diseases in some parts of the Island rendered the provision under this head insufficient.
Excess credit to be surcharged.
Under-estimated: increase in the number of prisoners under confinement.
Over-estimated.
do.

Under-estimated.
The greater part of the amount composing these two items, namely, R306,134, has been brought forward for expenditure in 1887.
The amount allowed in the Supplementary Supply Bill for cost of cement required for the completion of the Breakwater does not appear to have been expended; hence the decrease.
Under-estimated, owing to the falling off in the value of silver.
Over-estimated.

do.
Under-estimated.
Over-estimated.
do.
do.
do.
do.

Audit Office,
Colombo, May 31, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

VIII.—ABSTRACT OF REVENUE AND EXPENDITURE, and of Receipts and Payments on Personal Accounts, from January 1 to December 31, 1886.

	R.	c.	R.	c.
To Balance on January 1, 1886 :—				
In the General Treasury and District Chests ..	5813551	75¼		
In the hands of the Crown Agents ...	163352	18		
			5976903	93¼
To Arrears of Revenue	174031	34		
Customs	2903282	48		
Port and Harbour Dues	479700	1		
Land Sales	355498	31½		
Land Revenue	1083011	29		
Rents, exclusive of Lands	321400	70		
Licenses	1380076	95		
Stamps	1047448	46		
Taxes	38947	39		
Postage	14443	23		
Fines, Forfeitures, and Fees of Court ...	64297	29		
Government Vessels	59754	94		
Sale of Government Property	1093699	13		
Reimbursements	387380	37		
Electric Telegraph	53628	60		
Miscellaneous Receipts	368531	8¼		
Interest ..	154454	55		
Pearl Fishery	3971	32		
Special Receipts	6395	90		
Railway Receipts	2692595	44		
			12682548	78¾
To Drafts drawn .. .	—		8213988	34
Sums placed to credit of Crown Agents .	—		4222645	86
Remittances received	—		4232539	37
Paper Currency	—		1830000	0
Sums received in Deposit, viz :—				
Suitors' money, District Court	1404781	2		
Do. Court of Requests .	120599	24		
Lapsed Loan Board Funds	29477	20		
Nanu-oya Railway	21547	8		
Breakwater Works	43422	79		
Assessment, Grant-in-aid Roads	26577	44		
Colombo Waterworks	1554	17		
Basses and Minicoy Light Dues	21488	45		
Railway Permanent Way Stock	158233	66		
Public Works	425778	75		
Government Balance in Oriental Bank Corporation	189133	88		
Currency Note Reserve Fund	1871180	52		
Do. Depreciation Fund ...	820	0		
Telegraph Receipts	220667	34		
Widows' and Orphans' Pension Fund ...	95477	57		
Other Deposits	3841395	43		
			8472134	54

	R.	c.	R.	c.
By Establishments :—				
Fixed Salaries	1940055	29½		
Provisional Salaries	2331200	64½		
Allowances	77928	75		
Office Contingencies	132196	78		
			4481381	47
By Services exclusive of Establishments :—				
Pensions, Retired Allowances, and Gratuities ...	689058	74		
Revenue Services	484800	53		
Administration of Justice ..	169700	60		
Ecclesiastical	3144	62		
Charitable Allowances	48942	97		
Education	248770	39		
Hospitals and Sanitation	476821	81		
Police Services	116801	18		
Prison Services	432368	63		
Rent	2908	72		
Transport	94525	77		
Conveyance of Mails and Postal-Telegraph Services	292288	90		
Works and Buildings	247391	76		
Roads, Streets, and Bridges	1433400	57		
Miscellaneous Services	208539	79		
Interest	744039	39		
Colonial Store	29277	84		
Military Expenditure	629193	42		
Government Vessels	59380	33		
Refund of Duties, Drawbacks, &c. ..	91559	32		
Lands taken for Government Purposes ..	12491	9		
Immigration ...	77350	30		
Railway Services	1816656	24		
Exchange	122272	80		
			8531685	71
By Expenditure against balances of previous years :—				
Works and Buildings	30477	64		
Roads, Streets, and Bridges	137176	14		
			167653	78
By Drafts paid	—		8189148	53
Sums debited to Crown Agents	—		3958155	46
Remittances made	—		4227420	37
Paper Currency	—		1010000	0
Payments from Deposits, namely :—				
Suitors' money, District Court ...	1448736	59		
Do. Court of Requests ...	98976	23		
Lapsed Loan Board Funds	23192	38		
Nanu-oya Railway	318255	2		
Breakwater Works ..	261996	99		

To sums received in repayment of Advances, viz. :—				
Breakwater Engineer	55544	32		
Egyptian Exiles	7096	13		
Public Works Department	2360179	81		
Survey Department	82850	93		
Waterworks Contractor	9000	0		
Board of Trade	50275	36		
Trustees of Ceylon Savings Bank	4804	17		
Railway Department	1504989	44		
Currency Commissioners	1010000	0		
Redemption of Oriental Bank Corporation Notes ...	468864	36		
Colonial Store	993587	4		
Other Advances	205714	27		
			6752905	83
To Loan to Municipal Council, Kandy, repaid ..	—		2659	3
Her Majesty's Government	—		277	96
Indian Government	—		240255	23
Straits Government	—		1167	84
Mauritius Government	—		66	12
Agents, Calcutta	—		2129	77
Agents, Bombay	—		1016	52
Agents, Madras	—		5164	54
To Crown Agents' receipts, viz.:—				
Proceeds of Bills drawn on the Colony ...	4100000	0		
Advances at call	931653	86		
Board of Trade	30823	41		
Interest on Investments	40420	61		
Other Receipts	99254	94	5202152	82
Total Receipts on Personal Accounts .	—		39179103	77
Total ...	—		57838556	49

Assessment, Grant-in-aid Roads ...	20925	40		
Colombo Waterworks	257655	38		
Basses and Minicoy Light Dues ..	20472	91		
Railway Permanent Way Materials Stock ..	194404	60		
Public Works	426351	66		
Government Balance in Oriental Bank Corporation	71909	59		
Currency Note Reserve Fund ...	1087000	0		
Telegraph Receipts	219433	37		
Widows' and Orphans' Pension Fund ...	6964	96		
Other Deposits	3831302	53		
			8287577	61
By Advances made, viz :—				
Railway Department	1514944	64		
Egyptian Exiles	6815	88		
Public Works Department	2534830	71		
Survey Department	78710	77		
Colonial Store	1038565	75		
Board of Trade	42427	2		
Currency Commissioners	2429283	2		
Other Advances ...	211814	44		
			7857392	23
By Her Majesty's Government	—		277	96
Indian Government	—		315994	34
Straits Government	—		1897	37
Agents, Calcutta	—		255	50
Agents, Bombay	—		1782	89
Agents, Madras ...	—		11757	17
Crown Agents' disbursements, viz. :—				
Breakwater Works ..	40604	35		
Colombo Waterworks .. .	36991	79		
Stores purchased	689995	19		
Advances repaid . .	1320127	37		
Interest on Sinking Fund, Breakwater Loans ...	527758	25		
Do. Waterworks Loans .. .	198639	76		
Do. Railway Loans	595743	40		
Railway Permanent Way Materials ...	190844	14		
Nanu-oya Railway	53120	87		
Post Office, London	65276	16		
Salaries	130728	45		
Pensions	439903	50		
Colonial Exhibition	33894	50		
Family Remittances	169829	86		
Other disbursements	278689	84		
			5072147	46
Total Payments on Personal Accounts	—		35983506	89
Total Expenditure and Payments ...	—		52114527	85
Balance, December 31, 1886 ..	—		5724028	64
Total	—		57838556	49

IX.—STATEMENT SHOWING THE BALANCE OF THE CEYLON GOVERNMENT AVAILABLE FOR APPROPRIATION on January 1, 1887

Nil.

Audit Office,
Colombo, May 31, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

X.—STATEMENT OF ALL LOANS MADE BY THE COLONY, AND PAYABLE TO IT.

For what cause.	Under what Authority.	Amount of Original Loan	Amount repaid to December 31, 1886.	Balance repayable on December 31, 1886.	Probable date of Final Repayment.	Source from which Repayment is to be made.
		R. c.	R. c.	R. c.		
Kandy Waterworks ...	Ord. 18 of 1884	250,000 0	5,834 28	244,165 72	1925	Water-rate on house property within Municipal limits.
Kandy Industrial School..	The Governor	10,000 0	100 0	9,900 0	Not defined	
		260,000 0	5,934 28	254,065 72		

Audit Office,
Colombo, May 13, 1887

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

XI.—STATEMENT OF THE ACTUAL REVENUE AND EXPENDITURE OF THE COLONY for the Nine Months ended September 30, 1887.

REVENUE.	R.	c.
Arrears of revenue of former years recovered	131,430	15
Revenue of the Current Year.		
Customs	2,346,309	60
Port and Harbour Dues	66,568	94
Colombo Harbour Dues	348,098	96
Land Sales	158,376	51
Land Revenue	697,205	64
Rents, exclusive of Lands	234,042	50
Licenses	1,031,748	7
Stamps	798,454	68
Taxes, Assessment on Houses and Gardens	21,859	61
Postage	11,904	43
Fines and Forfeitures	38,993	4
Government Vessels	44,339	35
Sale of Government Property	712,828	72
Reimbursements in aid of expenses incurred by Government	306,041	76
Interest	110,988	85
Miscellaneous Receipts	150,190	67
Special Receipts	3,365	32
Pearl Fishery	399,479	64
Telegraph Receipts	28,332	54
Railway Receipts	2,181,834	57
Total ...	9,822,393	55

EXPENDITURE.	R.	c.
Establishments.		
Fixed Salaries	1,396,936	94
Provisional and Temporary Salaries	1,776,952	85
Allowances	50,816	34
Office Contingencies	85,318	92
Services, exclusive of Establishments.		
Pensions and Retired Allowances	398,398	2
Revenue Services	167,574	34
Administration of Justice	76,512	45
Charitable Allowances	33,491	83
Education	163,356	98
Hospitals and Sanitation	332,575	80
Police Services	87,402	79
Prison Services	277,787	63
Rent	2,182	52
Transport	74,001	1
Conveyance of Mails and Postal-Telegraph Services	192,801	1
Works and Buildings	120,719	49
Roads, Streets, and Bridges	971,714	6
Miscellaneous	90,709	79
Interest	456,932	88
Colonial Store	8,481	54
Military Expenditure	474,922	48
Government Vessels	38,667	11
Refund of Duties	47,407	42
Lands taken for Government Purposes	170	0
Immigration	52,675	55
Railway Services	982,346	5
Exchange	19,184	60
Forest Services	72,658	47
Total ...	8,452,698	87

Audit Office,
Colombo, October 14, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

XII.—COMPARATIVE STATEMENT OF THE ACTUAL REVENUE AND EXPENDITURE OF THE COLONY for the Nine Months ended September 30 of 1886 and 1887.

REVENUE.	Nine months ended September 30, 1886.	Nine months ended September 30, 1887.	Increase.	Decrease.
	R. c.	R. c.	R. c.	R. c.
Arrears of Revenue of former years recovered ...	142,506 96	131,430 15	—	11,076 81
Revenue of the Current Year.				
Customs	2,081,407 76	2,346,309 60	264,901 84	—
Port and Harbour Dues ...	61,462 66	66,568 94	5,106 28	—
Colombo Harbour Dues ..	286,392 50	348,098 96	61,706 46	—
Land Sales ...	175,256 74	158,376 51	—	16,880 23
Land Revenue ...	858,716 98	697,205 64	—	161,511 34
Rents, exclusive of Lands ...	231,429 50	234,042 50	2,613 0	—
Licenses	997,409 60	1,031,748 7	34,338 47	—
Stamps	789,282 56	798,454 68	9,172 12	—
Taxes, Assessment on Houses and Gardens	25,779 46	21,859 61	—	3,919 85
Postage	8,716 68	11,904 43	3,187 75	—
Fines and Forfeitures ...	45,934 48	38,993 4	—	6,941 44
Government Vessels ...	43,633 17	44,339 35	706 18	—
Sale of Government Property...	755,448 64	712,828 72	—	42,619 92
Reimbursements in aid of expenses incurred by Government	277,392 42	306,041 76	28,649 34	—
Interest	108,135 79	110,988 85	2,853 6	—
Miscellaneous Receipts ...	238,798 36	150,190 67	—	88,607 69
Special Receipts ..	3,564 33	3,365 32	—	199 1
Pearl Fishery	2,684 37	399,479 64	396,795 27	—
Telegraph Receipts ...	28,644 77	28,332 54	—	312 23
Railway Receipts ...	1,957,698 16	2,181,834 57	224,136 41	—
Total ...	9,120,295 89	9,822,393 55	1,034,166 18	332,068 52
Deduct Decrease ...			332,068 52	
Net Increase ...			702,097 66	

EXPENDITURE.	Nine months ended September 30, 1886.	Nine months ended September 30, 1887.	Increase.	Decrease.
Establishments.	R. c.	R. c.	R. c.	R. c.
Fixed Salaries ...	1,401,427 34	1,396,936 94	—	4,490 40
Provisional and Temporary Salaries	1,608,916 32	1,776,952 85	168,036 53	—
Allowances	44,518 67	50,816 34	6,297 67	—
Office Contingencies ...	95,477 48	85,318 92	—	10,158 56
Services, exclusive of Establishments.				
Pensions and Retired Allowances	397,451 75	398,398 2	946 27	—
Revenue Services ...	247,517 49	167,574 34	—	79,943 15
Administration of Justice ...	111,972 65	76,512 45	—	35,460 20
Ecclesiastical ...	3,134 40	—	—	3,134 40
Charitable Allowances ...	32,924 20	33,491 83	567 63	—
Education	158,486 81	163,356 98	4,870 17	—
Hospitals and Sanitation ...	322,885 82	332,575 80	9,689 98	—
Police Services ...	81,921 59	87,402 79	5,481 20	—
Prison Services ...	281,467 78	277,787 63	—	3,680 15
Rent	2,156 14	2,182 52	26 38	—
Transport	69,478 15	74,001 1	4,522 86	—
Conveyance of Mails and Postal Telegraph Services	203,960 62	192,801 1	—	11,159 61
Works and Buildings ...	112,146 47	120,719 49	8,573 2	—
Roads, Streets, and Bridges...	789,536 58	971,714 6	182,177 48	—
Miscellaneous ...	101,843 95	90,709 79	—	11,134 16
Interest	453,969 43	456,932 88	2,963 45	—
Colonial Store ...	13,888 57	8,481 54	—	5,407 3
Military Expenditure ...	472,932 53	474,922 48	1,989 95	—
Government Vessels ...	30,947 89	38,667 11	7,719 22	—
Refund of Duties ...	81,975 74	47,407 42	—	34,568 32
Lands taken for Government Purposes ...	419 50	170 0	—	249 50
Immigration	50,864 1	52,675 55	1,811 54	—
Railway Services ...	930,061 23	982,346 5	52,284 82	—
Exchange	18,784 23	19,184 60	400 37	—
Forest Services ...	—	72,658 47	72,658 47	—
Total ...	8,121,067 34	8,452,698 87	531,017 1	199,385 48
Deduct Decrease ...			199,385 48	
Net Increase ...			331,631 53	

Audit Office,
Colombo, October 14, 1887.

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

XIII.—COMPARATIVE STATEMENT OF THE ESTIMATED AND ACTUAL REVENUE AND EXPENDITURE OF THE COLONY for the Nine Months ended September 30, 1887.

REVENUE.	Estimated Revenue for 9 months.	Actual Revenue for 9 months.	INCREASE.	DECREASE.
	R. c.	R. c.	R. c.	R. c.
Arrears of revenue of former years recovered ...	116,250 0	131,430 15	15,180 15	—
Revenue of the Current Year.				
Customs	2,250,000 0	2,346,309 60	96,309 60	—
Port and Harbour Dues ...	63,750 0	66,568 94	2,818 94	—
Colombo Harbour Dues	300,000 0	348,098 96	48,098 96	—
Land Sales	307,500 0	158,376 51	—	149,123 49
Land Revenue ..	787,500 0	697,205 64	—	90,294 36
Rents, exclusive of Lands ...	262,500 0	234,042 50	—	28,457 50
Licenses	1,080,000 0	1,031,748 7	—	48,251 93
Stamps	795,000 0	798,454 68	3,454 68	—
Taxes, Assessment on Houses and Gardens ...	27,000 0	21,859 61	—	5,140 39
Postage	26,250 0	11,904 43	—	14,345 57
Fines and Forfeitures ...	37,500 0	38,993 4	1,493 4	—
Government Vessels ...	37,500 0	44,339 35	6,839 35	—
Sale of Government Property...	795,000 0	712,828 72	—	82,171 28
Reimbursements in aid of Expenses incurred by Government ...	405,000 0	306,041 76	—	98,958 24
Interest	120,000 0	110,988 85	—	9,011 15
Miscellaneous Receipts ...	157,500 0	150,190 67	—	7,309 33
Special Receipts ...	7,500 0	3,365 32	—	4,134 68
Pearl Fishery	2,647 50	399,179 64	396,832 14	—
Telegraph Receipts ...	42,300 0	28,332 54	—	13,967 46
Railway Receipts ...	2,250,000 0	2,181,834 57	—	68,165 43
Total ...	9,870,697 50	9,822,393 55	571,026 86	619,330 81
			Deduct Increase ...	571,026 86
			Net Decrease ...	48,303 95

EXPENDITURE.	Estimated Expenditure for 9 months.	Actual Expenditure for 9 months.	INCREASE.	DECREASE.
Establishments.	R. c.	R. c.	R. c.	R. c.
Fixed Salaries ...	1,434,974 81	1,396,936 94	—	38,037 87
Provisional & Temporary Salaries	1,918,500 0	1,776,952 85	—	141,547 15
Allowances	61,920 75	50,816 34	—	11,104 41
Office Contingencies ...	93,512 25	85,318 92	—	8,193 33
Services, exclusive of Establishments				
Pensions & Retired Allowances	546,913 95	398,398 2	—	148,515 93
Revenue Services ...	260,317 50	167,574 34	—	92,743 16
Administration of Justice ...	98,004 0	76,512 45	—	21,491 55
Charitable Allowances ...	37,846 50	33,491 83	—	4,354 67
Education	184,263 0	163,356 98	—	20,906 2
Hospitals and Sanitation ...	331,606 50	332,575 80	969 30	—
Police Services ..	82,207 50	87,402 79	5,195 29	—
Prison Services ...	272,683 50	277,787 63	5,104 13	—
Rent	3,588 75	2,182 52	—	1,406 23
Transport	85,275 0	74,001 1	—	11,273 99
Conveyance of Mails and Postal Telegraph Services ...	214,487 25	192,801 1	—	21,686 24
Works and Buildings ..	155,393 25	120,719 49	—	34,673 76
Roads, Streets, and Bridges ...	1,065,653 25	971,714 6	—	93,939 19
Miscellaneous	91,613 25	90,709 79	—	903 46
Interest	565,122 75	456,932 88	—	108,189 87
Colonial Store ...	16,800 0	8,481 54	—	8,318 46
Military Expenditure ...	473,625 0	474,922 48	1,297 48	—
Government Vessels ...	40,875 0	38,667 11	—	2,207 89
Refund of Duties ...	30,000 0	47,407 42	17,407 42	—
Lands taken for Government Purposes	4,215 0	170 0	—	4,045 0
Immigration	62,181 0	52,675 55	—	9,505 45
Railway Services ...	1,456,680 0	982,346 5	—	474,333 95
Exchange	95,295 0	19,184 60	—	76,110 40
Forest Services ..	102,750 0	72,658 47	—	30,091 53
Total ...	9,786,304 76	8,452,698 87	29,973 62	1,363,579 51
			Deduct Increase ...	29,973 62
			Net Decrease ...	1,333,605 89

Audit Office,
Colombo, October 14, 1887

R. W. D. MOIR,
Acting Auditor-General and Controller of Revenue.

XIV.—ESTIMATE OF THE REVENUE AND EXPENDITURE OF THE COLONY for the Year 1888.

REVENUE.	R.	c.
Arrears of Revenue of former years ...	140,000	0
Revenue of the Current Year.		
Customs	3,170,000	0
Port and Harbour Dues ...	487,300	0
Land Sales	350,000	0
Land Revenue ...	1,050,000	0
Rents, exclusive of Land ...	330,000	0
Licenses	1,600,000	0
Stamps	1,060,000	0
Taxes	38,000	0
Postal & Commission on Money Orders	36,000	0
Fines, Forfeitures, and Fees of Court	56,000	0
Government Vessels ...	58,000	0
Sale of Government Property ...	1,090,000	0
Reimbursements in aid of Expenses incurred by Government ...	440,000	0
Electric Telegraph	56,000	0
Miscellaneous Receipts ...	210,000	0
Interest (including interest on cash balances)	156,500	0
Special Receipts	6,350	0
Railway Receipts	3,050,000	0
Pearl Fishery	400,000	0
Draft from Balances	153,791	0
Total ...	13,937,941	0

EXPENDITURE.	R.	c.	R.	c.	R.	c.
Fixed Establishments.						
Civil	1,061,477	75				
Judicial	576,940	0				
Ecclesiastical	74,120	0				
Public Instruction	26,750	0				
Medical	85,050	0				
Police	23,500	0				
Prisons	42,690	0				
Colonial Store	26,272	0				
			1,916,799	75		
Interest on Breakwater loan	—		530,008	0		
Do. on Waterworks loan	—		234,089	0		
Do. on Railway loan	—		900,001	0		
Do. on Widows' and Orphans' Pension Fund ...	—		19,000	0		
Do. and Sinking Fund, Kalawawa loans ...	—		25,000	0		
Contribution towards Military Expenditure ...	—		600,000	0		
Contribution to Irrigation Fund under Ordinance No. 2 of 1887	—		200,000	0		
					4,424,897	75
Charges voted by the Legislative Council in Appropriation Ordinance for 1888	—		—		9,222,338	93
					13,647,236	68
Works charged on Balances	—		—		153,791	0
Surplus Revenue	—		—		136,913	32
			Total ...		13,937,941	0

Council Chamber,
Colombo, December 20, 1887.

G. T. M. O'BRIEN,
Acting Colonial Secretary.

XXIV.—1887.

SUPPLEMENTARY SUPPLY BILL, 1887.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887."

Ordered by the Legislative Council to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 5 cents.]

EXTRACT from the Minutes of the Legislative Council, dated December 14, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887":—

The Hon. R. W. D. MOIR, Acting Auditor-General.
The Hon. J. B. A. BAILEY, Acting Treasurer.
The Hon. P. RAMA-NATHAN, } Unofficial Members.
The Hon. R. A. BOSANQUET, }

REPORT.

THE Sub-Committee appointed by the Legislative Council to report upon an Ordinance intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1887," have to report as follows :—

The total amount to be voted being larger than that of any Supplementary Bill since 1881, the Members of the Sub-Committee have thought it advisable to obtain from the Government a statement of the exact position of the Revenue and Expenditure of the Colony for the current year to the end of November, with an estimate for the month of December. This statement, with a list of the amounts of the Supplementary Supply Bills since 1880, is appended to this Report.—(See appendix.) If the expenditure for the current month does not materially exceed the average shown, there is reason to believe that the Revenue for the current year will exceed the Expenditure, and leave a small surplus.

The Committee having examined in detail the items of the Bill, which is practically for expenditure already incurred, desire to record the explanations furnished to them regarding the more important sums.

1.—ESTABLISHMENTS.

Colombo Waterworks.—The additional sum of Rs. 8,868·32 for salaries, upkeep, and repairs to standpipes, &c., has been required since the Government took charge of the works from the contractors. Previous to that all expenditure incurred was provided for out of the loan raised for the Waterworks.

Medical Department.—In connection with the epidemics referred to further on in this report, a sum of Rs. 4,031·66 has been expended on account of Establishments.

2.—PENSIONS.

The estimate for the year, as provided in the Supply Bill, is framed upon the basis of the actual pensions payable at the time that estimate is prepared. It is a constantly fluctuating item. The amount estimated in the Bill may be reduced to Rs. 10,500, and is to meet payments made by the Treasurer within the Colony.

3.—REVENUE SERVICES.

Salt.—The season having been a more than usually favourable one for collecting salt, the amount purchased and collected by Government has been considerably in excess of the quantity estimated. This may be classed under the heading of reproductive expenditure.

Pearl Fishery.—In connection with the recent very profitable pearl fishery, which was not anticipated when the Supply Bill for the current year was originally framed, a sum of Rs. 50,000 has been expended.

Law Expenses.—Under the heading "Civil, Criminal, and Revenue Law Expenses" appears the sum of Rs. 3,939·77, expended in connection with certain cases which arose out of the frauds discovered at the Customs in 1885. The Committee trust that steps have been taken to prevent the possibility of the recurrence of similar frauds.

7.—EDUCATION.

The increased number of scholars who have qualified themselves under the existing Code necessitates an additional vote of Rs. 17,669 for grants in aid.

8.—HOSPITALS AND SANITATION.

The amount expended by the Principal Civil Medical Officer's Department this year is very considerably in excess of last year, owing to the extraordinary number of cases of small-pox, chicken-pox, and fever which came under the notice of the medical officers for treatment, both in the hospitals and in the villages, more especially in the Southern, Western, and North-Western Provinces.

9.—PRISON SERVICES.

The requirements under this head for 1887 appear to have been under-estimated. When the sum of Rs. 59,261·42 now provided has been added to the original vote in the Supply Bill, the total will be less than the expenditure of the preceding year by over Rs. 10,000.

Mahara Quarry Railway Line.—The cost of upkeep of the permanent way has been transferred from the Breakwater Department to the Prison Department.

13.—WORKS AND BUILDINGS.

For completing the new Kachchéri at Puttalam Rs. 2,830 is required. When the estimates for this work were prepared it was intended to utilise prison labour to a larger extent than has been found practicable. The vote asked for represents chiefly the value of paid labour which it was found necessary to substitute.

The repairs to Trinity Church, Colombo, have been effected at a cost of Rs. 3,000, in pursuance of instructions contained in a despatch from the Secretary of State, dated November 19, 1880.

14.—ROADS, STREETS, BRIDGES, AND CANALS.

The vote of Rs. 23,821 for completing the Waṭagoḍa-Pundalu-oya road is approved by the Committee. This road will prove, when opened, an important feeder to the Railway.

Province of Uva.—The sums which appear in the Bill for improvements to roads and for constructing a new bridge at Dikapiṭiya on the Lémastoṭa road are for the completion of works which the Director stated, when examined by the Committee on the Supply Bill for the current year, would be required in addition to the sums therein provided, but for which the estimates had not then been prepared.

Repair of Bridges.—The amounts to be voted under this heading, viz., Rs. 11,721, are for the repairs of damages caused by floods.

Irrigation.—The sum of Rs. 20,000 is required for enlarging and extending the channels from the Walawé-gaṇga anicut, and is stated to be money well laid out.

The sum of Rs. 10,680 for salaries of Superintendents and Assistant Superintendents of Village Tanks was formerly paid out of the vote of Rs. 200,000 which appeared in the Supply Bill every year under the heading *Works*, "Village Tanks," &c.

For the restoration of Nuwarawęwa a vote of Rs. 20,000 is required for the pay of pioneers who had to be employed on this work in the place of prisoners, who were not available. In order to prevent damage to the works, the North road, and private property, it was found necessary to fill up two important breaches in the bund before the rainy season set in.

Departmental Charges.—The large sum of Rs. 14,700 which appears for purchase of tools and plant for the use of the Public Works Department is explained as being necessitated partly on account of the larger sums voted for public works in 1887 and partly for the purchase of pumping engines required in bridge works.

Miscellaneous.—The sum of Rs. 3,200 is required for the purchase of ten tip wagons for transporting stone (for the roads) between Mahara and Colombo and stations on the Sea-side Line.

The sum of Rs. 7,500 for the dredging of the inner harbour will not all be spent this year. The dredger at present in use is not suitable for the work, it having been originally constructed for the purpose of sinking cylinders. Mr. Kyle, who was examined by the Committee, stated that one-tenth of the work would be completed by the end of the month at a cost of half the sum voted for the entire work. A new dredger is expected shortly from England, which is calculated to complete the work more expeditiously and at less cost.

15.—Miscellaneous Services.

Treasurer.—Under the heading "Colonial and Indian Exhibition" is included a sum of Rs. 3,506·02, which consists of Rs. 2,000 honorarium to Dr. Trimen and Rs. 1,000 to Mr. W. E. Davidson for services rendered in London at the Ceylon Court, and Rs. 506·02 on account of disbursements by the Crown Agents.

Glasgow International Exhibition.—The Rs. 2,000 which appears under this heading is a grant promised by the Government to the Planters' Association.

17.—Colonial Store.

Mounted Orderlies.—Under this heading Rs. 5,000 was allowed for 1886 on account of clothing, saddlery, &c. The Committee understand that the cost of forage is included in this vote. They think that the description of the vote should be altered accordingly. The sum of Rs. 3,494·71 now required is for expenditure incurred in 1886 in the purchase of new saddlery, horse furniture, &c.

18.—Military Expenditure.

Out of the capital sum of £24,000 which the Council has agreed to provide for the Colombo defence works, Rs. 63,281·85 are required this year for the purchase of Cline Lodge and on account of construction.

21.—Lands taken for Government purposes.

Queen's Cottage, Nuwara Eliya.—A sum of Rs. 8,344 has been expended in connection with the purchase of about twenty acres of land, belonging to Mr. Maitland and Mr. James Robertson, which adjoin the Queen's Cottage grounds. The papers placed before the Sub-Committee do not disclose the reasons for the purchase.

23.—Railway Services.

Incidental Expenses.—Rs. 27,253·57 is practically a cross-entry, being a payment from general revenue to the Nánu-oya Railway Construction Fund. This amount has already been credited to the revenue in the form of Railway Receipts.

The votes for rebates are payable under agreements made with the object of attracting fresh traffic from Uva for the Nánu-oya Extension.

Haputalé Extension.—Rs. 1,271·02.—This amount was expended in England by the Crown Agents.

A few minor additions, including a sum of Rs. 2,000 required for paper in the Government Printing Office, have, at the request of the Government, been made by the Sub-Committee.

Attached to this report will be found revised copies of the Supplementary Estimates and the Supplementary Supply Bill, showing the alterations that will have to be made therein if the recommendations of the Sub-Committee be adopted by the Council.

R. W. D. MOIR.
A. BAILEY.
P. RA'MA-NA'THAN.
R. A. BOSANQUET.

Legislative Council Chamber,
Colombo, December 20, 1887.

APPENDIX.

	Rs.	Rs.
Actual revenue up to November 30, 1887	12,130,488	
Estimated revenue for December, 1887	1,235,450*	
		13,365,938
Expenditure to November 30, 1887	10,960,400	
Estimated expenditure for December, 1887	2,348,000*	
		13,308,400
Estimated excess of receipts over expenditure in 1887 ...	—	*57,538

Amount voted in the Supplementary Supply Ordinances of 1880 to 1886 inclusive.

		Rs.	c.			Rs.	c.			Rs.	c.
1880	...	508,699	22	1883	...	317,476	42	1885	...	587,739	90
1881	...	729,546	87	1884	...	285,161	37	1886	...	544,505	86
1882	...	162,696	42								

* Average of the receipts and expenditure in December of 1885 and 1886.

XXV.—1887.

FINAL SUPPLEMENTARY SUPPLY BILL, 1886.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1886."

Ordered by the Legislative Council to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1887.

Price 5 cents.]

EXTRACT from the Minutes of the Legislative Council, dated December 14, 1887.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1886":—

The Hon. R. W. D. MOIR, Acting Auditor-General.
The Hon. J. B. A. BAILEY, Acting Treasurer.
The Hon. P. RÁMA-NÁTHAN, } Unofficial Members.
The Hon. R. A. BOSANQUET, }

REPORT.

THE Sub-Committee appointed by the Legislative Council to report upon a Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1886" have to report as follows :—

1. *Pensions.*—A sum of Rs. 4,012·28 has to be added under the heading "Government of India" on account of pensions paid in India to pioneers, &c.

2. *Hospitals and Sanitation.*—A sum of Rs. 16,917·64 was incurred on account of a protracted outbreak of small-pox in four different provinces. It was not possible to include this vote in the Supplementary Supply Bill for 1886, because at the time this Bill was passed the expenditure had not been ascertained.

Miscellaneous Services.—"Crown Agents," Rs. 6,593·99, becomes necessary in consequence of the fall in exchange.

R. W. D. MOIR.
A. BAILEY.
P. RA'MA-NA'THAN.
R. A. BOSANQUET.

Legislative Council Chamber,
Colombo, December 20, 1887.

XXVI.—1887.

NUMERICAL ABSTRACT

OF THE

INHABITANTS LIABLE TO PERFORM LABOUR DURING THE YEAR 1888,

UNDER THE PROVISIONS OF

THE ORDINANCE No. 10 OF 1861.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 10 cents.]

THOROUGHFARES ORDINANCE.

NUMERICAL ABSTRACT OF THE INHABITANTS LIABLE TO PERFORM LABOUR UNDER ORDINANCE No. 10 OF 1861, IN THE SEVERAL PROVINCES, DURING THE YEAR 1888.

WESTERN PROVINCE.

Colombo District.

Division.	Estimated Labour for 1888.	
Ambatalenpahala East ...	1,051	
Ambatalenpahala West ...	1,010	
Peta Kotte	1,726	
Etul Kotta	2,021	
Galkissa	3,408	
Mampe	1,551	
Kesbewa	1,026	
Mattegoda	669	
Kahatuduwa	766	
Moratuwa West	5,385	
Kelaniya and Biyagama ...	3,295	
Mahara and Naranwala ...	2,760	
Dalugama	1,094	
Bemmulla and Galagamuwa ...	2,218	
Paluwa	2,485	
Oyoaboda	2,215	
Uruwala	1,758	
Megodapotha	1,358	
Egodapotha	1,643	
Miwitidebahera	394	
Gangaboda Pattu	5,507	
Hanwella	1,219	
Waga	638	
Padukka	701	
Ranala	2,048	
Aturugiriya	1,760	
Kottawa	1,334	
Mulleriyawa	369	
Kosgama	1,164	
Kaluaggala	1,017	
Hendala ...	1,693	
Peliyagoda	1,002	
Kandana	2,802	
Gampaha	1,191	
Galahitiyawa	1,397	
Dandugama	2,258	
		63,933

Negombo District.

Town and Gravets	564	
Otarapalata	4,772	
Godakahapalata	3,101	
Andiambalama	2,615	
Minuwangoda	2,137	
Mabadale	2,420	
Udugampola	2,470	
Talahena	432	
Udugaha Pattu	2,300	
Yatigaha Pattu	3,175	
		23,986

Kalutara District.

Panadura	3,962	
Bolgoda	2,300	
Desestra Kalutara	710	
Welapura Kalutara	283	
Kalamulla	1,356	
Payyagala	3,393	
Beruwala	2,537	
Alutgama	2,831	

Pandun Korale.

Welipenna	3,749	
Maha Pattu	2,453	
Gangaboda Pattu	1,500	

Division	Estimated Labour for 1888.	
Rayigam Korale.		
Keselhenawa	2,526	
Rambukkana	3,179	
Horana	3,678	
Molligoda	4,323	
		38,780
Kegalla District.		
Gane and Galboda Pattus ...	1,889	
Meda and Egodapota Pattus ...	2,544	
Kinigoda Korale North ...	1,102	
Kinigoda Korale South ...	2,504	
Tunpalata Pattu	2,913	
Mawata and Kanduha Pattu ...	2,973	
Kandupita Pattu	2,351	
Otara and Gandolaha Pattus ...	2,332	
Kirawelli Pattu, East	1,801	
Do. West... ...	1,689	
Atulugam Korale	2,076	
Panawal Korale	1,096	
Dehigampal Korale	2,645	
Lower Bulatgama	1,510	
		29,425
Ratnapura District.		
Uda Pattu Kuruwiti Korale ...	3,578	
Meda and Palle Pattus, do. ...	1,764	
Uva Pattuwa, Nawadun, do. ...	1,810	
Meda and Palle Pattus, do. ...	3,132	
Kolonnagama Pattu	1,276	
Diyapotagam Pattu	783	
Meda and Panni Atakalan ...	2,315	
Kandawel and Tambayam ...	1,028	
Kukul Korale	1,220	
Meda Korale	2,565	
Kadawata Korale	1,886	
		21,357
Total...	—	177,481

CENTRAL PROVINCE.

Kandy District.

Udunuwara	2,559	
Yatinuwara	2,693	
Tumpane	2,157	
Harispattu	5,388	
Pata Dumbara	6,209	
Uda Dumbara	4,060	
Pata Hewaheta	2,839	
Udapalata	2,990	
Uda Bulatgama	3,117	
		32,012

Matale District.

Matale Town	1,207	
Matale South	5,998	
Matale East	3,494	
Matale North	3,987	
		14,686

Nuwara Eliya District.

Udapane	3,100	
Pallepane	980	
Walapane	2,290	
Maturata and Kohoka ...	1,900	
Uda Hewaheta	1,500	
		9,770
Total ...	—	56,468

NORTHERN PROVINCE.

Jaffna.

Division.	Estimated Labour for 1888.	
Jaffna	10,000	
Valikamam East	5,400	
Do North	9,000	
Do. West	8,700	
Vadamiradchy	11,000	
Thenmiradchy	10,000	
Pachchelaipalli	2,200	
Karachchy	600	
Punareen	1,100	
Islands	7,000	
		65,000

Mannar.

Mannar East	687	
Erukkalampiddi	531	
Mannar Central	261	
Mannar West	1,018	
Mantai North	276	
Mantai South	346	
Perunkali	376	
Iluppukadavai	124	
Nanaddan East	476	
Nanaddan West	516	
Musali North	444	
Musali South	348	
		5,403

Mullaittivu.

Rarikkaddumulai North ...	717	
Rarikkaddumulai South ...	193	
Mullivavallai	309	
Putukkudiyiruppu	338	
Molpattu North	165	
Karunavalpattu South ...	96	
Tunukkay	94	
		1,912

Vavuniya-Vilankulam.

Kilakkumulai North	301	
Kilakkumulai South	437	
Kilakkumulai Sinhalese ...	223	
Naduchcheddikulam	226	
Cinnachcheddikulam East ...	230	
Cinnachcheddikulam West ...	120	
Cinnachcheddikulam East and West, Sinhalese	53	
Motkumulai	93	
Panankamam	134	
Molpattu East	211	
Molpattu South	90	
Udaiya-ur	99	
		2,217
Total ...	—	74,532

SOUTHERN PROVINCE.

Galle District.

Four Gravets	4,059	
Wellaboda Pattu	11,344	
Talpe Pattu	9,461	
		24,864
Gangaboda Pattu :		
Baddegama	1,228	
Telikada	1,280	
Wanduremba	1,143	
Mapelegama	1,289	
		4,940
Hinidum Pattu	—	1,155
Bentota Walallawiti Korale :		
Kosgoda	1,202	
Welitara	1,306	
Bentota	1,400	
Induruwa	1,283	
Korle	1,236	
Dodduwa	297	
		6,724

Matara District.

Four Gravets	—	2,909
Weligam Korale :		
Weligama	3,217	
Denepitiya	3,683	
Akuressa	2,153	
		9,053
Wellaboda Pattu :		
Gandara	3,975	
Dikwella	3,580	
		7,555
Gangaboda Pattu :		
Batuwita	2,114	
Aturelia	2,112	
Narandeniya	1,902	
		6,118
Kandaboda Pattu :		
Kandapitiwelakade ...	1,754	
Hakmimawelikade ...	2,834	
		4,588
Morowak Korale :		
Palle Pattu	1,598	
Udugaha Pattu	1,560	
		3,167

Hambantota District.

Hambantota	1,825	
Hinbunne	2,425	
Tangalla	5,946	
Kanumaldeniya	3,574	
Kanuketiya	1,850	
		15,620
Total ...	—	86,693

EASTERN PROVINCE.

Batticaloa District.

Koralaipattu	1,774	
Eraur	2,255	
Manmunai East	4,614	
Manmunai West	2,113	
Eruvil and Porativu ...	2,376	
Karavaku North	2,506	
Karavaku South	2,408	
Nintavur	767	
Akkaraipattu	2,200	
Akkaraipattu Vanam ...	158	
Sammanturai and Nadukadu ...	1,310	
Nadukadu and Natanai Vanams ...	157	
Panama	480	
Bintonna	526	
		23,644

Trincomalee District.

Trincomalee Gravets, Divisions Nos. 11 and 12	122	
Tampalakamam Pattu :		
Tampalakamam and Kantalai...	281	
Kinniyai and Kudakkai ...	679	
Kaddukkulamai Pattu :		
Tamil Villages	590	
Sinhalese Villages ...	219	
Koddayar	917	
		2,808
Total ...	—	26,452

NORTH-WESTERN PROVINCE.

Kurunegala District.

Waduragala	194	
Ratgalla	151	
Torawature	113	
Doratiyawa	151	
Katupiti	117	
Indulgoda	152	
Dembepola	109	
Ihala Talampitiya	142	
Pahala do.	169	
Wilbawe	95	
Habage	123	
Toliyagonne	67	

Division.	Estimated Labour for 1888.
Kompola	95
Kotikapola	88
Pilesse	121
Welikanda	63
Mitenwala	211
Galapitamulla	64
Arampola	66
Madawa	104
Kahandawelipota	104
Tingola	98
Potubowe	68
Kahapatwala	120
Wataraka	105
Inguruwatta	100
Dunukewatta	36
Iriminne	60
Gonagala	61
Waraddana	58
Boyagoda	112
Ganegoda	98
Pallegoma	132
Paragahadeniya	106
Weligepola	57
Akade	56
Puswelle	143
Kadihagoma	105
Buluwala	94
Hewanpola	42
Alawala	94
Ambakote	113
Siyambalangomua	77
Talgaspitiya	35
Hatarabage	52
Moratike	95
Kandepola	82
Paragoda	274
Wegoma	241
Niyangoma	104
Miyanadeniya	160
Kandagedara	149
Gurumade	55
Panagomu	77
Rambadagalla	138
Ridigoma	75
Rambukandana	21
Reddagoda	68
Udahorombuwe	112
Delwita	163
Malmiwala	135
Galle	115
Nelawa	206
Dehelgomu	147
Pannala	87
Bakmigolle	50
Mudunduwe	50
Nebilikumbure	61
Ibbagomu	20
Talgodapitiya	118
Polgolle	117
Ratwita	72
Balawattala	134
Telambugolle	28
Elwalapitiya	21
Mipitiya	90
Udakondawala	54
Koswatta	78
Udattapola	415
Galgomuwa	129
Mapegomuwa	107
Wegolle	89
Wewagedara	108
Pellandeniya	106
Udadigane	129
Kidapola	101
Minhettiya	134
Tambagalle	74
Nelawa	120
Hiripitiya	134
Malagomuwa	131
Hunupola	218
Potuwila	93
Peddawa	105
Mahamukalanyaye	95
Otuwila	58
Maraluwawa	161
Millawa	130
Atamune	138
Ranawana	158

Division	Estimated Labour for 1888.
Mohottawa	157
Domatagolle	153
Talaotuwe	99
Wellawa	144
Waraddana	231
Goluwawe	111
Yaggepitiya	55
Mallopitiya	74
Hadirawalane	48
Potupitiya	30
Beddegoma	131
Kandulawa	101
Diyawe	54
Aragoma	86
Gokarelle	115
Daramitipola	60
Kandegedara	89
Lenawa	142
Karandagolle	61
Kendawala	104
Kiribamune	108
Deluwa	88
Ambanpola	40
Niramulla	51
Diyature	76
Gurusse	94
Madahapola	141
Keralankadawala	46
Nikawehera	54
Makulpota	123
Henawa	75
Diddeniya	74
Maviwela	25
Jahapagoma	81
Tittawelle	53
Arankele	47
Demadamane	37
Tammita	94
Manapaye	121
Pahalatihawa	29
Thalatihawa	69
Hatigomuwa	139
Hatpokuna	96
Galatanwewa	89
Kumbukulewa	87
Kiralawewa	74
Machiya	181
Ponnilawa	74
Madagalla	86
Nikawewa	157
Mamunugoma	81
Galgiriyawa	87
Kambuwatawana	190
Talandapitiya	82
Bulnewa	46
Bulupitiya	106
Uhumiya	167
Godawita	65
Ahugoda	123
Wewelpola	102
Parakumbura	94
Tammita	111
Udugoma	117
Potubera	224
Maningomu	79
Embalawatta	67
Harbarawa	119
Mawatagoma	107
Linigiriya	52
Holambatamulla	63
Kaluhendiwala	57
Parabewile	67
Polpitiye	133
Pawaliya	170
Polgahawela	389
Morugoma	103
Mawatta	113
Madalagoma	67
Ratmalagoda	69
Palambe	128
Kebittawala	75
Udapola	114
Egalle	89
Kolluro	144
Imbulgoda	57
Poramadale	403
Udumulla	126
Waduwawe	230

Division.	Estimated Labour for 1888.
Nugawela	124
Alauwe	120
Ihalawottewe	187
Paranmulle	132
Koholane	160
Udakokulawala	158
Wewala	141
Imbulgoda	162
Pahalakalapitiya	58
Boyawalane	149
Galgomuwe	170
Ihalakalapitiya	168
Keppetiwalane	139
Gimigatyitiye	112
Pentenigoda	107
Nugagahagedara	61
Miwewe	145
Ganegoda	163
Narammala	270
Karalappola	182
Embalapola	106
Marawita	256
Aturwala	201
Kudagammana	193
Metiyagane	179
Medagoda	120
Rammutugala	207
Diyadora	113
Wadugedara	70
Bobugammanagedara	81
Galgomulla	88
Murutenge	128
Panawitiya	127
Dotawa	97
Etampola	124
Kotuwelle	198
Bopitiya	206
Elibichchiya	170
Narangoda	253
Dodanpola	165
Malgomuwa	117
Katugampola	190
Wattagedara	142
Galayaye	178
Elabodagoma	174
Madigepola	110
Bowatta	275
Iriyagolle	209
Ihalapotuwewa	92
Pahalapotuwewa	164
Karangomuwa	132
Nettipolagedara	100
Molligoda	115
Udahorombawa	53
Kurikotu	91
Anukkane	180
Arakyala	121
Godagoma	119
Karagahagedara	160
Kadurugashena	87
Ihalagomagomuwa	115
Kamburupola	99
Anukkanhena	165
Henegedara	171
Haggomu	131
Enboru	188
Barigoda	131
Nakkawatta	123
Bihalpola	150
Malwanegedara	74
Delana	140
Handalankawa	289
Makandure	172
Gonulla	210
Kandepola	140
Welpalle	156
Raddalane	100
Nalawalane	83
Watuwatta	67
Hiruwalpola	187
Willattawa	84
Dummalasuriya	54
Ihalakadigomuwa	205
Pahalawirakodiyane	93
Yaganwela	106
Karandawila	105
Kappangomuwa	130
Udubaddawe	197

Division.	Estimated Labour for 1888.
Bibiladeniya	226
Udadeni	162
Kumbalwala	117
Dandagomuwe	85
Mahinpitiya	97
Kabale	104
Mawela	40
Dikwehera	89
Digalla	110
Elatalawa	123
Galpola	53
Palugama	148
Dahaneggedara	132
Pihimbiye	181
Madulupitiya	199
Tarana	144
Kelegedara	104
Karandawa	118
Baranpola	169
Maunawe	82
Kudakolawa	84
Kiniyawa	82
Manwelinbuwa	138
Hendiyapola	52
Getale	52
Galwewa	58
Brahamawayagama	88
Bingiriye	55
Dematawa	79
Moragane	87
Kandagedara	56
Kanagwana	59
Kanoyaye	112
Wetehepitiya	104
Dehikumbura	168
Hanwella	82
Bamunugedara	115
Kadadunne	106
Huruggomu	96
Madawala	191
Matagane	193
Mahakeliya	191
Nimamale	96
Walahiya	191
Panakaduwa	102
Watukana	93
Panagomuwa	106
Itawawatta	155
Wedande	235
Diulgaspitiya	217
Bogoda	190
Nelliya	117
Wariyapola	229
Medagoma	156
Balagahayaye	57
Habarawa	101
Wilakatupota	156
Panowa	141
Bamunakotu	188
Ipalawa	106
Diulakele	156
Werele	69
Mamunuwe	163
Bayawa	115
Mirihamgoma	132
Muwanwellegedara	115
Rabukkana	124
Magulagoma	141
Tissawa	104
Medagoma	91
Wilbagedara	45
Palawita	63
Dunupota	116
Gampaha	125
Kadawalagedara	98
Yayegedara	130
Dorabawila	43
Katumuluwa	85
Madigemdiyale	87
Gallehepitiya	125
Tekowa	83
Bamunumulla	98
Hettipola	76
Ellakonde	46
Giratalane	98
Moragalla	52
Detiyamulle	83
Pallegoma	80

Division.	Estimated Labour for 1888.
Akurana	51
Kurundukumbura	82
Diggalagedara	45
Dotelle	112
Amunukote	71
Kitagoma	83
Beliwewa	108
Maulle	89
Holambaluwa	77
Kobaigane	66
Baladora	74
Baddegoma	80
Pubbiliya	99
Likolewa	36
Bamunugoma	85
Halmillakotuwa	102
Yakadapota	167
Dinlepitiya	135
Hulawa	116
Girille	141
Mito	100
Alutgoma	109
Kudarawaliya	31
Talakolewa	92
Hilogoma	82
Diulle	56
Likolapitiya	70
Nammuwewa	42
Kadigawa	73
Halbes	82
Galpanawa	56
Munnekulama	79
Hulugalla	192
Bogollagoma	61
Hulugedara	90
Pinnapola	75
Kirindigalla	124
Hammilla	133
Ihalagoma	88
Nikaweratiya	184
Diyagoma	103
Tumbulle	94
Olupeliyawa	100
Maho	65
Kirimetiya	108
Paligoma	116
Kattambuwawa	104
Makaduwawa	95
Uduweriya	167
Ullatapola	127
Mediyawa	124
Kumbukwewa	76
Ipalogoma	103
Tammitagoma	145
Walaliya	138
Bakmiyawa	100
Diulle	93
Waragammana	93
Ambanpola	105
Kirimetiya	123
Detawa	65
Tambare	146
Nabadawe	161
Tibiriyawa	237
Ihalaembogoma	224
Hiddewe	193
Alutwewa	142
Mudiyannegalawe	102
Potanegoma	135
Andarawe	95
Palukadawala	134
Madadombe	227
Konwewa	84
Diulle	60
Galkadawala	152
Padipanchawe	112
Hettigoma	110
Angakkadawala	116
Nochchiya	88
Nahettukulama	79
Torawa	36
Peddogoma	62
Hettiarachchigoma	126
Giriba	130
Tambutte	150
Madige	47
Gampola	105
Mahananeriya	85

Division.	Estimated Labour for 1888.	
Balalla	139	
Imbulgodayagoma	148	
Kumbukwewa	93	
Galle	59	
Talambuwa	104	
Kadambawe	97	
Karambe	98	
Ambagawewe	125	
Potuwewa	69	
		52,805
Puttalam District.		
Puttalam	115	
Rajawanniya	124	
Demala Pattu North	703	
Demala Pattu South	306	
Akkarai Pattu	927	
Kalpitiya	1,767	
Anavulundanpattu North ...	911	
Anavulundanpattu South ...	1,585	
Yagam Pattu	999	
Yatokalam Pattu	1,548	
Medapalata	1,538	
Otarapalata	1,329	
Kammala North	1,162	
Kammala South	849	
		13,863
Total ..	—	66,668

NORTH-CENTRAL PROVINCE

Nuwarakalaweya.

Anuradhapura Town ...	1,005	
Nuwaragam Korale ...	1,238	
Kanadara Korale	986	
Kende Korale	1,227	
Kadawatu Korale	1,455	
Eppawala Korale	748	
Vilachchiya Korale ...	1,379	
Kalpe Korale	1,032	
Kunchuttu Korale ...	1,162	
Mahapotana Korale ...	711	
Udiyankulama Korale ...	842	
Matombuwa Korale ...	627	
Ulagalle Korale	828	
Undurawa Korale... ...	670	
Kiralawa Korale	799	
Negampaha Korale ...	506	
Maminiya Korale	810	
Kalagam Korale	1,168	
		17,193
Tamankaduwa.		
Megoda Pattu	863	
Egoda Pattu	437	
		1,300
Total ...	—	18,493

PROVINCE OF UVA.

Udapalata	1,091	
Dambawinipalata	602	
Yatipalata	1,067	
Gampaha	763	
Mahapalata	810	
Dehiwinipalata	561	
Kumbalwela	722	
Bogoda	1,662	
Badulla	1,574	
Passara	1,499	
Kandukara	1,327	
Buttala	571	
Buttalawedirata	1,365	
Wellawaya	578	
Kandapalla	1,396	
Oyapalata	1,589	
Viyaluwa	1,112	
Bintenna	1,055	
Wogam Pattu	1,186	
Nilgala	331	
Medagam Pattu	1,383	
Mahawedirata	1,293	
Total ...	—	23,537

XXVII.—1887.

STATEMENT

SHOWING

THE AMOUNT OF SCHEDULE FEES RECEIVED BY THE SEVERAL FISCALS

DURING

THE QUARTER ENDED DECEMBER 31, 1887.

(In continuation of No. XXI. of 1887.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 5 cents.]

FISCALS' SCHEDULE FEES.

STATEMENT showing the Amount of Schedule Fees received by the Fiscals of the several Provinces, agreeably to the 16th clause of the Ordinance No. 4 of 1867, and Ordinance No. 43 of 1884, during the Quarter ended December 31, 1887.

Province and District.	Quarter ended December 31, 1887							
	October.		November.		December.		Total	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
Western.								
Colombo	360	35	403	12	349	70	1,113	17
Negombo	101	0	86	35	60	90	248	25
Kalutara	134	65	133	85	78	25	346	75
Ratnapura	44	60	27	10	22	75	94	45
Kégalla	43	45	30	70	32	35	106	50
Avisáwélla	4	50	7	50	5	35	17	35
Total ...	688	55	688	62	549	30	1,926	47
North-Western								
Kurunégala	68	90	65	85	66	15	200	90
Chilaw	62	50	51	55	19	0	133	5
Puttalam	22	85	7	95	14	30	45	10
Kalpitiya	10	20	1	5	6	95	18	20
Total ...	164	45	126	40	106	40	397	25
Eastern.								
Batticaloa	149	45	181	95	129	0	460	40
Trincomalee	37	80	38	55	43	35	119	70
Total ...	187	25	220	50	172	35	580	10
North-Central								
Anurádhapura	13	75	10	85	12	55	37	15
Central.								
Kandy	179	5	185	10	144	60	508	75
Mátalé	22	15	23	20	10	95	56	30
Nuwara Eliya	14	10	3	90	15	70	33	70
Hatton	29	37	40	15	24	30	93	82
Total ...	244	67	252	35	195	55	692	57
Uva.								
Badulla	52	75	60	65	52	90	166	30
Northern.								
Jaffna	430	35	422	0	372	25	1,224	60
Mannár	8	70	31	95	15	80	56	45
Mullaittivu	10	10	5	85	7	55	23	50
Vavuniya-Viláṇkulam ...	0	70	1	10	—		1	80
Total ...	449	85	460	90	395	60	1,306	35
Southern.								
Galle	182	10	134	70	204	10	520	90
Mátara	170	45	149	80	107	0	427	25
Tangalla	82	5	21	10	25	50	128	65
Hambantota	8	75	1	35	4	75	14	85
Balapitiya	48	30	45	60	49	50	143	40
Total ...	491	65	352	55	390	85	1,235	5

RECAPITULATION.

	Quarter ended December 31 1887	
	Rs.	c.
Western Province	1,926	47
North-Western Province	397	25
Eastern Province	580	10
North-Central Province...	37	15
Central Province	692	57
Province of Uva	166	30
Northern Province	1,306	35
Southern Province	1,235	5
Total ...	6,341	24

XXVIII.—1887.

THE PEARL BANKS.

REPORT

OF

AN INSPECTION OF THE PEARL BANKS.

BY

CAPTAIN J. DONNAN,

Inspector.

Ordered by His Excellency the Governor to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 15 cents.]

INSPECTION OF THE PEARL BANKS.

The INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY.

No. 144.

Master Attendant's Office,
Colombo, December 1, 1887.

SIR,—I HAVE the honour to report my return to Colombo, on November 30, from an inspection of some of the pearl-oyster beds off Arippu and the island of Káraitívu.

2. The chief object of the inspection was to examine the beds of oysters on the Chéval Paar, and to lift from them and wash a sample of oysters, in order to test their value and publish a notice of the intended fishery during the next north-east monsoon; but some other banks, besides the Chéval, were examined, viz., the part of the Periya Paar which was fished in 1879, the Periya Paarkarai, the Vaṇkálai Paar, and the Mótaragam Paar off Arippu, and the Káraitívu Paar and Muttuwartu Paar off the island of Káraitívu.

3. The Chéval Paar was found to contain extensive beds of oysters of four years or four years and three months old, both on the east and west sides of it. In all, an area of about 21,746,745 superficial yards, containing about 161,429,684 oysters. I sub-divided the east side into three parts, north, south, and centre, and the west side into two parts, north and south, as the oysters on the centre part of the east side and north part of the west side seemed to be smaller than on the other parts; but the sample lifted from the north part of the west side proved the most valuable of all.

4. The north part of the east side of Chéval, which was partially fished in April last, was found to have an area of oysters of about 2,770,438 superficial yards, containing about 17,315,225 oysters. The oysters on it averaged 25 to a dive, and 6 per cent. of dead shells were found. From this part of the bank a sample of 12,053 oysters was washed. The yield of pearls weighed 8 kalangies and $16\frac{2}{16}$ manjadies, valued at Rs. 218, which gives a value of Rs. 18·09, and 14·52 manjadies of pearls per 1,000 oysters.

5. The south part of the east side of Chéval was found to have an area of oysters of about 4,882,500 superficial yards, containing about 35,398,025 oysters. The oysters on it averaged 29 to a dive, and 4 per cent. of dead shells were found. From this part of the bank a sample of 12,060 oysters was washed. The yield of pearls weighed 7 kalangies and $13\frac{6}{16}$ manjadies, valued at Rs. 172, which gives a value of Rs. 14·27, and 12·60 manjadies of pearls per 1,000 oysters.

6. The centre part of the east side of Chéval was found to have an area of oysters of about 5,382,938 superficial yards, containing about 64,595,232 oysters. The oysters on it averaged 48 to a dive, and only three-quarter per cent. of dead shells were found. From this part of the bank a sample of 12,016 oysters was washed. The yield of pearls weighed 3 kalangies and 17 manjadies, valued at Rs. 78·25, which gives a value of Rs. 6·51, and 6·41 manjadies of pearls per 1,000 oysters. This sample gave the smallest yield of pearls and least value of all the samples lifted.

7. The north part of the west side of Chéval was found to have an area of oysters of about 4,383,875 superficial yards, containing about 21,919,360 oysters.

The oysters on it averaged 20 to a dive, and 3 per cent. of dead shells were found. From this part of the bank a sample of 12,180 oysters was washed. The yield of pearls weighed 8 kalangies and $19\frac{5}{16}$ manjadies, valued at Rs. 2·25, which gives a value of Rs. 18·45, and 14·45 manjadies of pearls per 1,000 oysters.

8. The south part of the west side of Chéval was found to have an area of oysters of about 4,326,994 superficial yards, containing about 25,201,842 oysters. The oysters on it averaged 24 to a dive, and 3 per cent. of dead shells were found. From this part of the bank a sample of 12,110 oysters was washed. The yield of pearls weighed 8 kalangies and $13\frac{7}{16}$ manjadies, valued at Rs. 212, which gives a value of Rs. 17·50, and 14·12 manjadies of pearls per 1,000 oysters.

9. The small produce of pearls and low valuation of the sample lifted from the central part of the east side of Chéval prove that the oysters on it are not yet sufficiently matured for fishing, and when I met Mr. Twynam at Silávatturai, we both agreed to recommend that portion of the bank being kept for fishing in March, 1889. Although the oysters on the other parts of the Chéval are not of full age, they are sufficiently advanced to afford a profitable fishery next season, and, excluding the estimated number of oysters on the central part of the east side of Chéval, there remains on the other parts an estimated number 99,834,452 oysters, having an average value of Rs. 17·08 per 1,000; and that number is considerably more than it is likely to be possible to fish in one season under the most favourable circumstances.

10. On the Mótaragam Paar, which was fished last April, I found about 3,206,250 oysters still remaining, which are available for fishing next season should an opportunity of doing so occur.

11. On the Periya Paarkarai and Vaṇkálai Paar I found a small patch of oysters about two years old, but they were not sufficiently numerous to become of any value.

12. On the Káraitívu Paar I found a small bed of three-years old oysters, containing about 1,605,465 oysters, averaging 15 to a dive.

13. On the Muttuwartu Paar, which lies about six miles to the north-west of Dutch Bay, I found a splendid bank of three-years old oysters, having an area of about 7,320,600 superficial yards, containing about 49,414,050 oysters, averaging 27 to a dive. The oysters were firm, on very suitable rocky ground. I have great hope of this bank affording a handsome fishery in 1890, although there is no record of its having ever yielded a fishery.

14. On the west side of the Chéval the old oysters, on nearly every part of it, were covered with young oysters about three months old, attached to them so thickly that on several oysters I counted from 60 to 125 young ones. These young oysters will cause some extra labour to the men in the diving boats during the next fishery, as it will be necessary to have them pulled off the old oysters as they are brought up and thrown overboard again; and this will no doubt cause the destruction of an immense number of them. Similar young oysters were found thickly spread over the Periya Paar fishing ground of 1879.

15. I forward herewith a copy of the valuation statement of the sample oysters lifted from the centre part of the east side of Chéval. This statement is, of course, *not to be published* in the notice of the next fishery:—

Statement of the Valuation and Produce of 12,016 Oysters taken from the centre part of east side of Chéval in November, 1887.

Description.	Size in Basket.	Number.	Quantity in Chevoe.	Kalangey.	Manjady.	Total. Kalangey	Total. Manjady.	Value.	Total Value.	Per Chevoe.	Per Kalangey.
								Rs. c.	Rs. c.		
1 Kodai ...	20	1	—	—	$\frac{5}{16}$	—	$\frac{5}{16}$	0 5	0 5	—	1 star pagoda
2 Peesel ...	30	3	—	—	1	—	1	1 5	1 5	—	6 do.
3 Koroval ...	50	6	—	—	$1\frac{5}{16}$	—	$1\frac{5}{16}$	3 21	3 21	—	14 do.
4 Anathareq ...	80	3	$\frac{20}{320}$	—	$\frac{5}{16}$	—	—	2 $62\frac{1}{2}$	—	12 star pagodas	20 do.
5 Koroval ...	—	8	—	—	$1\frac{4}{16}$	—	—	2 $62\frac{1}{2}$	—	—	12 do.
6 Kodai ...	—	6	—	—	$\frac{14}{16}$	—	$2\frac{10}{16}$	0 $15\frac{1}{2}$	5 $40\frac{1}{2}$	—	1 do.
7 Vadivoe, ex-	100	$\frac{128}{320}$	—	—	$4\frac{5}{16}$	—	—	—	—	—	—
8 cluding Ma-	200	$\frac{104}{320}$	—	—	8	—	—	—	—	—	—
9 danku.	400	$\frac{48}{320}$	—	—	6	—	$18\frac{5}{16}$	41 67	41 67	15 do.	—
		$\frac{264}{320}$									
10 } 11 } Tool .	600 } 800 }	—	—	1	$3\frac{12}{16}$	1	$3\frac{12}{16}$	16 $62\frac{1}{2}$	16 $62\frac{1}{2}$	—	4 do.
12 }	1000 }										
13 Marsie tool ...	—	—	—	1	9	1	9	10 15	10 15	—	2 do.
						3	$16\frac{5}{16}$		78 16		
14 Shell Pearls ...	—	—	—	—	$\frac{5}{16}$	—	$\frac{5}{16}$	—	0 9	—	—
						3	17		78 25		

J. DONNAN, Inspector of Pearl Banks.
W. C. TWYNAM, Government Agent, Northern Province.
M. SEEMANPILLAI, Mudaliyár, Adikar of Musálai.
அ. ம. மகுமுதுலெவ்வை,
அ. க. முகம்மது முகிய்யித்தீன் ஹாஜி மரைக்கார்,
நா. செய்யிது முகம்மது,
செ. யி. முகம்மது சதகத்துல்லா,
} Pearl Merchants.

I shall forward a copy of my diary of the inspection in a few days.

I have, &c.,
J. DONNAN,
Inspector.

DIARY OF THE INSPECTION OF OCTOBER AND NOVEMBER, 1887.

Wednesday, October 19.

LEFT Colombo harbour at 8.15 A.M. in the barque Sultan Iskander in tow of the Active bound for Silávatturai. Light variable winds and heavy banks of dark clouds over the land and to seaward. Noon, we were abreast of Negombo, and about that time a breeze sprung up from N.N.W. and continued in that quarter with some variations for the rest of the day. 6 P.M., Chilaw in sight, and we were abreast of it at 6.30. 8 P.M., cast off the Active and anchored, as there is only one man to attend to the engine,—who has charge of the vessel also,—and who cannot be expected to keep on watch night and day.

The weather all day has been dark and gloomy, and looked threatening as if there were a cyclone brewing in the neighbourhood of the Island.

Thursday, October 20.

2 A.M., the wind having come out from off the land light, we got under weigh and stood to the northward under sail. Daylight, light breeze from the eastward, found ourselves about eight miles north of Mutupanty. Weather seems to be clearing up, but still there are heavy banks of clouds about, especially to the S. and S.E. 7 A.M., the Active came up with us and took us

in tow again. Abreast of St. Anna's church at 11 A.M. Breeze sprung up from the westward at noon, to which we made sail, but had to take it in again at 1.30 P.M., in consequence of a squall coming down from the N.E. Passed north end of Káraitívu island at 5.30 P.M., and at 8 P.M. anchored in four fathoms water to wait for daylight to see our way into Silávatturai anchorage. The wind continued from N.E. and N.N.E. all the evening, with light rain and dark cloudy weather.

Friday, October 21.

The Active took us in tow again at daylight, and at 7 A.M. we anchored in our usual berth in Silávatturai Bay, when the coxswains and boatmen were sent ashore to get the boats ready. Heavy rain during the afternoon, with the wind variable from N.N.W. to N. and N.E.

Saturday, October 22.

This morning it seemed as if the weather were going to clear up, but at noon the clouds gathered again, and during the afternoon the rain came down in torrents, with squalls of wind in variable directions. Sent word on shore to the coxswains to come off at 6 A.M. to-morrow with boats and divers to go out to the banks.

Sunday, October 23.

The coxswains brought the boats off to the ship at 6 A.M., and at 6.30 we were under weigh in tow of the Active Anchored on the bearings and marks for the position of sunken tanks on Káraitívu shoal at 9 A.M., and then sent the boats out to search for the tanks, which they found in a short time about a hundred yards to eastward of the ship.

Placed the moorings of the shoal buoy between the tanks, and then the Active towed the ship about 1¾ mile to the N.N.W., where we anchored in six fathoms on the N.W. Chéval. The Active then laid out the buoys for guiding the boats in their work to-morrow. After anchoring, a diver was sent down alongside, and he brought up rock covered with heaps of young oysters of about three months old, and one old oyster. We had fine weather up to 3 P.M., when the rain began in a squall from N.N.E., which lasted half an hour; and for the rest of the day the weather was dull and gloomy.

The divers reported that the top of one of the tanks on Káraitívu shoal has fallen in, and that only one now remains perfect. One tank, an ordinary 400-gallon water tank, was sunk down weighted with stone in March, 1867. This lasted till March, 1880. Another 400-gallon tank, but not new, was sunk in March, 1878, and that is the one that has fallen in. An old 600-gallon tank was sunk in March, 1883, and that is the only one now perfect. It will be necessary to sink another tank next March or the following year.

Monday, October 24.

The boats went out at 7 A.M. to work over the space buoyed off, but had not been gone long when a heavy shower of rain came down from the N.W., which lasted about half an hour, and after that the weather cleared up. The boats came in at 1 P.M. after completing their work, and then I found that they had made the following dives within the circle of outer buoys:—18 on bare rock, 76 on bare sand, 167 on old oysters, and 103 on young oysters of three months; total, 364 dives. The old oysters averaged 16 to a dive on an average space of a little over two superficial yards, and dead shells were found in the proportion of 9 per cent. Young oysters of about three months old were found in great abundance all over the space gone over to-day. They were found attached to the old oysters in thick clusters. I counted from 60 to 125 on each old oyster. The presence of these young oysters will cause great delay in fishing the old ones, as the young will have to be picked off the old and thrown overboard again from the diving boats.

During the afternoon lifted the buoys and shifted the vessel 1½ mile to the N.W., and then laid the buoys out again. Left a buoy to mark out the position of the vessel before shifting, to facilitate the lifting of the sample after the whole bank has been gone over. The bearings of vessel's position before shifting were as follows:—Shoal buoy S. 23° E., distant 1¾ mile; Kalaar beacon S. 81° E.; and centre of Arippu tope N. 58° 30′ E. After shifting vessel a diver went down alongside and brought up 32 old oysters and 5 dead shells at one dive.

The weather was cloudy all day with a light N.W. wind.

Tuesday, October 25.

At daylight this morning there were rain clouds about, and heavy rain falling with a light N.W. wind. When the rain ceased, which it did about 7 A.M., the boats were sent out to examine the space buoyed off. The Active laid out a bamboo buoy on the fishing ground of 1879 on the Periya Paar, and found there young oysters of three months in great numbers. She also laid out a buoy on the N.E. Chéval as a mark to shift to, when we have done with the N.W. Chéval, and a buoy one mile to the N.W. to shift to this afternoon.

The boats came in about 1 P.M. after completing their work. The coxswains, after making up their diagrams of work, reported having made 16 dives on bare rock, 86 on bare sand, 19 on young oysters of three months, and 273 on old oysters, which were found nearly all over the space examined to day. They averaged 37 to a dive, on an average space of 2½ superficial yards, with dead shells amongst them of from 10 to 5 per cent. The young oysters were found extending from the ship in a N.W. direction for about a quarter of a mile.

The ship's position to-day was in six fathoms water with shoal buoy bearing S. 26° E. Left down to mark position.

After the boats came in the Active lifted the buoys, towed ship up to the N.W. buoy, and then laid the buoys out again. After anchoring, a diver was sent down alongside, who brought up 10 old oysters and 1 dead shell, which were covered with young oysters of three months attached to them; and he reported flat rocky bottom.

The weather was cloudy all day with a light N.W. wind, which worked round to the N.E. about 8 P.M.

Wednesday, October 26.

Fine clear weather this morning with a light breeze from E.N.E. The boats were sent out at 7 A.M. to examine the space within the buoys. The Active laid out a bamboo buoy on the Periya

Paarkarai, where oysters of two years were found, 3 or 4 to a dive. The boats came in about 1 P.M., and the coxswains reported having made 71 dives on bare rock, 48 on bare sand, and 247 on old oysters, averaging 21 to a dive, and an average space of 2¼ superficial yards to a dive. Dead shells were picked up equal to about 18 per cent. Young oysters of three months were found in great numbers attached to the old oysters at almost every dive. The ship's position was in seven fathoms water with shoal buoy bearing S. 31° 45′ E., distant a little over four miles, and Arippu tope centre N. 68° 30′ E. To-day's work finishes the inspection of the N.W. Chéval. After the boats came in the Active lifted the buoys, towed the vessel to the buoy laid out on N.E. Chéval yesterday, where we anchored, and then the buoys were laid out again. But when I fixed our position by cross bearing, I found we were half a mile too far to the eastward, so the buoys had to be lifted again and the vessel taken into proper position, by which time it was too late to lay the buoys out again. The weather was cloudy and rainy all the afternoon, with variable wind.

Thursday, October 27.

The Active laid the buoys out early this morning, and the boats went out at 7 A.M. A diver went down alongside and brought up in two dives 12 old oysters and 14 dead shells.

The boats came in about noon, when the coxswains reported having made 3 dives on bare rock, 150 on bare sand, and 206 on old oysters, averaging 31 to a dive, on an average space of 2¼ superficial yards to a dive. Dead shells were found to the extent of 50 per cent. The ship's position to-day was in 6¼ fathoms water with shoal buoy bearing S. 2° 45′ W., distant 4·13 miles, Arippu tope centre N. 68° E., Kalaar tower S. 67° 45′ E., and Kutiramalai tower S. 25° E., nearly about the centre of the space fished in April last, to which I have come purposely to see if there were any oysters left, as I did not believe that the divers had fished the ground clean, although they kept calling out "no oysters," and would persist in working to the S.E. The boats to-day were altogether on the fishing ground of April last, and yet they found oysters left to the extent of 31 to a dive on an average. The average on this ground before it was fished was 44 to a dive, so that it appears that the divers only lifted about one-fourth of the oysters then on the ground.

After the boats came in the Active lifted the buoy, towed vessel 1½ mile to the S.E., where we anchored, and then the buoys were laid out again. After anchoring, a diver went down alongside and brought up in one dive 81 old oysters and 2 dead shells. The weather to-day was dull and cloudy, with light showers of rain in the afternoon. The wind was from the S.E. in the morning and from N.N.W. in the afternoon.

Friday, October 28.

Last night it blew fresh from N.N.W., with light rain. A chopping sea got up, and we were obliged to drop a second anchor. At daylight the wind had veered round to the S.E., with rain and dark clouds all round. At 8 A.M., the rain having ceased, the boats went out to go over the space buoyed off, and the Active went out to lay a buoy three-quarters of a mile S.E. from the ship, and to dive to the S.E. of that buoy to see how far the oysters extended in that direction beyond it; and when she returned it was reported that old oysters extended for about four-tenths of a mile, and beyond that younger oysters for about quarter of a mile. The boats came in at 1 P.M., when the coxswains reported having made 4 dives on bare rock, 51 on bare sand, and 290 on old oysters in great abundance, averaging 49 to a dive on an average space of 2¼ superficial yards, and very nearly all over the space examined. The oysters of to-day's ground looked somewhat smaller and younger than on the ground we were on yesterday, and at present I think it would be advisable to reserve them for fishing in March, 1889, as very few dead shells were found amongst them. On the same ground in March last we got 50 oysters on the average to a dive, only one more than now. The ship's position to-day was in six fathoms water with shoal buoy S. 19° 15′ W., distant 2·95 miles; Arippu tope centre N. 59° 20′ E.; and Kalaar tower S. 73° E.

After the boats came in the Active lifted buoys, towed vessel to the southward about 1½ mile, where we anchored, and the buoys were laid out again. A diver went down alongside and brought up 21 old oysters and 1 dead shell in one dive.

The weather to-day was very unsettled, dark, and gloomy, with drizzling rain all the afternoon and a fresh northerly to N.N.W. breeze.

Saturday, October 29.

At daylight this morning it was blowing fresh from N.W., and heavy rain clouds all round. The boats went out at 7 o'clock, but I doubted their being able to do good work. They had only finished their first round when the rain came down, and I recalled them alongside, and the divers came on board shivering with cold.

Blowing moderately fresh from N.W. all day, with heavy banks of dark clouds about, and occasional showers.

About sunset it looked as if the wind would come out from the westward.

Sunday, October 30.

At daylight, still blowing from N.W., a moderate breeze, and much rain, but a nasty sea on from W. to S.W., and the wind inclined to W. The boats went out at 8 A.M. to complete their rounds left off yesterday, and they came in again shortly after noon, having made on this ground 15 dives on bare rock, 52 on bare sand, and 244 on old oysters, averaging 30 to a dive and 2¼ superficial yards to a dive. After the boats came in the Active lifted the buoys and towed vessel to the S.S.E. to the north Mótaragam, where we anchored, and the buoys were laid out again. To-day's work completed the examination of the Chéval. The ship's position was in six fathoms with shoal buoy bearing S. 36° W., distant 1 7/10 mile nearly; Kalaar tower S. 80° 45′ E.; and Kutiramalai tower S. 27° E. The wind went round to W.S.W. in the afternoon and the weather cleared up, but it was showery up to noon. I expect to hear of a cyclone having passed to the north of the Island during the last few days, when the weather looked decidedly cyclonish.

Monday, October 31.

The boats went out at 7 A.M. and finished the examination of the north Mótaragam by 9. The Active then lifted the buoys, towed the vessel to the south Mótaragam, and laid the buoys

out again, when the boats went out and completed the examination of it by 1 P.M. The coxswains reported having made on the north Mótaragam 80 dives on bare sand, 8 on bare rock, and 112 on old oysters, averaging 16 to a dive on $2\frac{1}{10}$ superficial yards; and on the south Mótaragam 137 dives on bare sand, 23 on bare rock, and 35 on old oysters, averaging 10 to a dive; but the oysters are younger looking than those on the north bank, and they cover a very small space of ground, so small indeed that I look upon it as being of no value. There are evidently some oysters left from last April's fishing on the north Mótaragam, but I have not worked out an estimate yet. The divers found a great many dead shells, in fact as many dead shells as oysters. I tried the experiment on the north Mótaragam of lifting oysters by a dredge, which I had brought with me for the purpose. I had it worked from the ship, a boat taking it out with about 40 fathoms of line attached to it, and dropping it when the line was stretched taut and then it was hauled in from the ship. We had four hauls on each side of the vessel from off each bow to off each quarter, which occupied about an hour. It took five men to haul it in, with a boat and three men in attendance to trip it up when it caught on rock; and in the eight hauls it only brought up 46 oysters. The size of the dredge is 2ft. 2in. across by 10½in. width of mouth. A diver got 6 oysters per dive alongside the ship; and in ordinary fishing a diver would make 8 to 10 dives per hour, so that a single diver would have got up in the hour as many oysters as the dredge, or probably more. I therefore fear that fishing a bank by dredges would not be practicable. I made this experiment in view of the probability of there being a scarcity of divers at the fishery in March next.

When the Active had lifted the buoys on the south Mótaragam, she took us in tow up to the Periya Paarkarai, where we anchored at 4 P.M. near the bamboo buoy laid out on the 26th, and then the buoys were laid out.

There was a light N.W. breeze all day, with banks of clouds about, and a heavy S.W. swell set in about noon. At 8 P.M. the wind veered round to the S.W. in a heavy squall, and continued in that quarter all night.

Tuesday, November 1.

At daylight this morning it was blowing strong from S.W., with a heavy sea on, and every appearance of its lasting a few days. It being impossible to do any work in this weather, we got under weigh at 9 A.M., leaving the buoys down, and ran into Silávatturai, where we anchored at noon. Blowing strong from S.W. all day. Sent the Active off this evening to Mannár with the following telegram to the Government Agent, Jaffna:—"Finished inspection Chéval and Mótaragam, but not lifted simple yet. Driven in from banks this morning by strong S.W. wind. Heaps of oysters on N.W. and E. Chéval, and 15,000,000 yet on the bank fished in April last, also from 2,000,000 to 3,000,000 left on Mótaragam. Not made estimate yet of E. and N.W. Chéval. Advisable to fish Mótaragam now. Could you arrange for boats and divers? Joakim coxswain says he could get fifty boats and divers from Kelakarai in ten days' time. The Active waits answer."

Wednesday, November 2.

Still at anchor in Silávatturai bay, as it has been blowing strong from S.W. all day. The Active returned from Mannár at 8 P.M. with an answer to my telegram. The Government Agent does not approve of fishing the Mótaragam now, as he thinks it would seriously prejudice the fishery in March next, and give rise to false reports; and he doubts the small quantity of oysters on it would pay the divers for coming from and returning to Kelakarai at this season of the year, when heavy rains may be expected.

Thursday, November 3.

Still at anchor off Silávatturai, the wind blowing fresh from S.W. all day. Having now carefully studied the diagrams and reports of the coxswains during the examination of the Chéval and Mótaragam I record the result as follows. The Chéval I have divided into two parts, east and west, and sub-divided each part into three, north, central, and southern:—

East Chéval, North Part.—This is the portion of the Chéval fished in April last, and I still find the area of ground on which old oysters lie to be, after deducting bare spots, 2,770,438 superficial yards, on which the oysters average 25 to a dive. That space divided by 4 yards to a dive gives 692,609 as the number of dives required to clean up the bed, which multiplied by 25 oysters to a dive gives 17,315,225 as the estimated number of oysters on the bed.

East Chéval, Central Part.—Area of bed of oysters, 5,382,938 superficial yards; number of dives to clean up the bed at 4 yards to a dive, 1,349,734; number of oysters on the bed at an average of 48 to a dive, 64,595,232.

East Chéval, South Part.—Area of bed of oysters, 4,882,500 superficial yards; number of dives to clean up the bed at 4 yards to a dive, 1,220,625; number of oysters on the bed at an average of 29 to a dive, 35,398,025.

Total area of oysters on east Chéval, 13,035,876 superficial yards; total number of oysters, 117,308,482.

West Chéval, North Part.—Area of bed of oysters, 4,383,875 superficial yards; number of dives to clean up the bed at 4 yards to a dive, 1,095,968; number of oysters on the bed at an average of 20 to a dive, 21,919,360.

West Chéval, Central Part.—Area of bed of oysters, 2,715,750 superficial yards; number of dives to clear up the bed at 4 yards to a dive, 678,937; number of oysters on the bed at an average of 30 to a dive, 20,368,111.

West Chéval, South Part.—Area of bed of oysters, 1,611,244 superficial yards; number of dives to clear up the bed at 4 yards to a dive, 402,811; number of oysters on the bed at an average of 12 to a dive, 4,833,732.

Total area of oysters on west Chéval, 8,710,869 yards; total number of oysters, 47,121,202.

Total area of the bed of oysters on east and west Chéval, 21,746,745 superficial yards, or 4,493 acres; total number of oysters on east and west Chéval, 164,429,684.

The oysters on all parts of the Chéval are of the same age, now four years, although on the north part of west Chéval and on the central part of east Chéval they appear somewhat smaller and younger, with fewer dead shells amongst them; but the percentage of dead shells will be obtained more accurately than I have yet been able to do when the sample oysters are being lifted.

The west side of the Chéval may be said to be covered with young oysters of about three months old attached in large numbers to the old oysters, as well as on rocky and sandy parts where there are no old oysters; and if I estimate the number of old oysters on the bed at about 47,000,000, the number of young ones may be roughly calculated at one hundred times that number, or 4,700,000,000, seeing that I counted as many as 125 on a single old oyster. These young oysters will cause much delay and trouble in fishing the old ones.

In framing my estimate I have allowed a greater number of yards to a dive and fewer oysters to a dive than the estimate of the divers, and I have also allowed a liberal deduction of space for bare spots.

The north Mótaragam fished last April has an area of oysters of about 855,000 superficial yards, containing about 3,206,250 oysters, allowing four yards to a dive with an average number of 15 oysters.

The oysters left on south Mótaragam are so few as to be scarcely worth estimating.

Friday, November 4.

This morning early the wind had gone round to S., but towards noon it went back to the S.W. again, and continued so all the rest of the day. There was lightning over the land in the evening, and signs of the south-wester being nearly over.

Saturday, November 5.

The wind was from the south again this morning, but went back to S.W. in the middle of the day, but more like an ordinary sea breeze than a south-wester. When I went on shore this evening there was a squall making up over the land, and I ordered the coxswains to come off to the ship at 5 o'clock to-morrow morning to go out to the banks again. I also ordered the engine driver of the Active to have steam at 5 o'clock.

Sunday, November 6.

The boats came out at 5.30 A.M., when we got under weigh in tow of Active and started for the Periya Paarkarai, where we arrived at 8.30, and found the buoys first as we left them. The boats went out and made two rounds and finished the examination of the bank by noon, finding only a small patch of two-years old oysters on the first round from the south to the west buoy, and not many oysters on it. The Active then lifted the buoys, towed ship to the Vaṇkálai Paar, three miles to the N.W., or rather N. 54° W., and then after the ship anchored laid the buoys out again. We anchored in 8¼ fathoms rocky ground. The ship's position in Periya Paarkarai was Arippu tope N. 84° 30′ E., and Kutiramalai tower S. 28° 30′ E. Light land wind this morning, calm at midday, and variable winds in the afternoon, with cloudy weather.

Monday, November 7.

The boats went out about 7 A.M. and finished the examination of the Vaṇkálai Paar about 9.30, finding only a small bed of two-years old oysters on the first round from the east to the south buoy, and nothing but bare sand and rock on the rest of the bank. The bed of young oysters is somewhat larger than that on the Periya Paarkarai, but there are too few oysters on it to come to be of any value. I have no doubt the oysters now found on both of these banks are the same as I found in March, 1886, then supposed to be three months old. The Active lifted the buoys when the boats came in, and towed ship to the southward to the Periya Paar fishing ground of 1879, where we anchored at 11 A.M. in 8¼ fathoms close to the bamboo buoy laid down by the Active on October 25. The buoys were then put out, and the boats went out to examine the bank, which they finished by 1 P.M., finding young oysters of two to three months pretty nearly all over the bank in great abundance. Kutiramalai tower bore S. 45° E., but I found the bearing of the shoal buoy did not agree with what it ought to bear, and therefore suppose it has been drifted to the N.E. during the late south-wester. The buoys were lifted after the boats came in, and the Active towed the ship to the west Chéval, where we anchored at 2.30 P.M. on a sandy patch about quarter of a mile to the S.E. of the buoy left down at ship's position on October 25. The Active then laid out two buoys to the N.W. to guide the boats in lifting the sample oysters to-morrow; we had fine smooth water to-day, but rain in the early morning and again in the evening; cloudy and variable wind.

Tuesday, November 8.

The boats went out this morning about 7 o'clock to the buoys placed by the Active yesterday, and came in about 2 P.M. with 12,097 oysters lifted from north part of west Chéval, in 481 dives off 1,120 superficial yards as estimated by the divers, which gives an average of 25 oysters and 2¼ yards to a dive, and in my estimate of that portion of the bank I allowed 20 oysters and four yards to a dive. The boats brought in 373 dead shells, which is about 3 per cent. fewer than I expected. The sample was lifted from a part of the bank where the divers at the inspection estimated 23 to a dive on the average, which shows how near their estimate is with the actual result. The weather was cloudy all day, with light winds in the forenoon and fresh northerly winds in the afternoon, veering round to N.E. after dark with rain.

Wednesday, November 9.

The boats went out at 7 A.M. to lift a sample from the south part of the west Chéval, and came in at 1 P.M. with 12,071 oysters lifted in 390 dives from an estimated space of 884 superficial yards, giving an average of 31 oysters and 2¼ yards to a dive; 387 dead shells were picked up, which is about 3 per cent., similar to what was obtained yesterday on the north part. The sample was lifted from spots where the oysters were estimated at 26 to an average dive when the boats were making their rounds over the bank.

I tried the use of the dredge again to-day, both in hauling it in from the ship and in drifting with it over the stern of the Active, and the result was most unsatisfactory as compared with the work done by divers; and I have come to the conclusion that it would never pay to fish a bank with dredges.

In the afternoon shifted vessel over to the west side of east Chéval and anchored on sandy ground. We had no rain to-day, but cloudy weather with a fresh N.N.E. breeze all the afternoon.

Thursday, November 10.

The boats went out at 7 A.M. to lift a sample of oysters from the south part of east Chéval, and came in at 1 P.M. with 12,070 oysters picked up in 365 dives on an estimated space of 802 superficial yards, giving an average of 33 oysters and two yards to a dive; 471 dead shells were picked up, which is about 4 per cent.

The sample was lifted from near the centre of the ground examined on October 29 and 30. Shifted vessel during the afternoon and anchored on sandy ground about half a mile to the southward of the position we were in on October 27.

Fine weather to-day, calm but cloudy, with rain after dark from the eastward.

Friday, November 11.

This morning at 6.30 sent the Active ashore with the two samples from the west Chéval, as they were getting rather offensive. Sent coxswain Joakim in charge of them with a note to the Adigar of Músali, to have the oysters carefully put away in ballams within the kottoo; also sent a telegram to the Government Agent, Jaffna, informing him of the landing of the sample and of my estimate of the number of oysters on the east and west sides of the Chéval. The Active on her way in took the boats in tow and dropped them at the buoy on centre part of east Chéval to lift a sample from about it.

The boats returned to the ship at 11 A.M. with 12,025 oysters lifted in 279 dives from a space estimated at 532 superficial yards, which gives an average of 43 oysters and two yards to a dive. Only 72 dead shells were picked up, which is under one per cent., a very small percentage. The oysters of this sample look younger than the others, and I think this part of the bank will keep for fishing till 1889. The boats went out again at 11.30 to the buoy on the north part of east Chéval, and returned at 2 P.M. with 5,825 oysters.

The Active returned at 4 P.M., and I heard from the Adigar that the samples when counted into ballams turned out a little more than the number I sent to him.

Fine weather all day, but cloudy.

Saturday, November 12.

The boats went out at 7 A.M. to complete lifting sample from north part of east Chéval. The Active went down to the shoal buoy and lifted it, and found it had drifted quarter of a mile from the sunken banks to the N.E. The boats came in at 10 A.M. with the balance of the sample. They got off this part of the bank, which is the part partially fished in April last, 12,053 oysters in 388 dives, lifted from an estimated space of 799 superficial yards, which gives an average of 31 oysters to a dive and two superficial yards; 738 dead shells were picked up, which is about six per cent.

Lifted anchor and proceeded to Silávatturai in tow of Active, and anchored there at 1 P.M.; had the three samples now on board landed and put away in ballams in the kottoo, with the exception of the sample from north part of east Chevál, which was kept in bags, there being no ballam available.

Sent the Active to Mannár with a telegram to the Colonial Secretary, informing him of the landing of samples and of the estimated number of oysters on the Chéval Paar. We had fine weather to-day, but a very heavy squall of wind and rain from the N.E. in the afternoon, whilst we were placing the oysters in the kottoo. Received to-day information from Tuticorin that a sample of 10,500 oysters recently washed from the banks in that neighbourhood only turned out 2¼ kalangies of pearls, valued at Rs. 59; and that in consequence of the low value of the oysters the fishing there will be postponed till 1889, which I am glad to hear, as it will release all the divers to be available for our fishery in March next.

Sunday, November 13.

At anchor off Silávatturai.

Monday, November, 14.

At anchor off Silávatturai, filling up water, and giving Active time to clean out boiler.

Tuesday, November 15.

Started at 6 A.M. to examine the banks off Káraitívu, where in April, 1886, I found some young oysters, and at 10 A.M. anchored on the Káraitívu Paar. The Active then laid out the buoys, and the boats went out to examine the ground within the buoys. At 2 P.M., when the boats had finished the second round, was obliged to call them in on account of a strong northerly breeze which prevented their doing good work. They had made 115 dives on rock, 29 on sand, and 48 on oysters of about 3 years old, averaging 15 to a dive. The oysters were found only within the first round or quarter of a mile from the ship. The ship's position was Kroosaddy tope on Káraitívu island S. 71° 30′ E., Kutiramalai beacon N. 87° 30′ E., and Dutch Bay tope, only seen from aloft, S. 15° 45′ E.; 8½ fathoms water at ship and 13 fathoms half a mile to the westward.

Lifted the buoys and shifted vessel to the southward to the Muttuwartu Paar, and then laid out the buoys again.

Strong northerly wind all the afternoon and clear weather. Found a current of about one knot per hour running to the southward.

Wednesday, November 16.

The boats went out at 7 A.M. and returned at noon after completing their three rounds. They made 127 dives on bare rock and 178 on three-years old oysters, averaging 20 to a dive. The oysters appear to lie pretty well all over the space examined, with the exceptions of from N.W. of the ship round by north to east on the second and third rounds, where nothing but bare rock was found. Finding that the boats did not get off oysters on the south side, lifted the buoys and shifted vessel about one mile or a little over to the southward, and laid the buoys out again.

The ship's position before shifting was Kroosaddy tope on Káraitívu bearing N. 57° 36′ E.; Kutiramalai beacon N. 60° 45′ E.; Dutch Bay tope S. 26° E.; and Dutch Bay church S. 25° 30′ E.; in 6½ fathoms, with 5 fathoms three-quarters of a mile to the eastward and 16 fathoms three-quarters of a mile to the westward.

We had fine clear weather to-day, with a moderately fresh N.N.E. breeze during the afternoon. Had a current all day setting to the southward about one knot per hour.

Thursday, November 17.

The boats went out at 7 A.M. and came in at noon after completing their three rounds. They got 35 dives on rock and 264 on oysters of three years old, averaging 32 to a dive, and spread all over the space gone over by the boats. The Active examined to the east of eastern buoy and to the south of southern buoy, and found the oysters extended about half a mile to the east of eastern buoy, but very few, only 3 or 4 to a dive, and that the southern buoy was placed about the limit of oysters in that direction. The ship's position was Kroosaddy tope N 51° E.; Kutiramalai beacon N 57° E.; Dutch Bay tope S 30° E; and Dutch Bay church S 31° E.; in 6½ fathoms, with 5 fathoms three quarters of a mile to the eastward and 16 fathoms three quarters of a mile to the westward. Shifted buoys and proceeded to the northward in tow of Active at 1 P.M., and anchored at dark about 2 miles to the S.W. of the reef off Silávatturai.

Very fine weather to-day.

Friday, November 18.

At daylight proceeded close up to the reef, on the southern end of which we placed a beacon composed of an old railway rail sunk into the reef about 8 ft., and on the upper end inch planks secured with through bolts and nuts forming a disk 4 ft. square. The planks were painted white and placed lengthways north and south, so as to show best from the eastward and westward.

After fitting up the beacon we went on to Silávatturai, where we anchored at 10 A.M.

Having worked out to-day the estimate of oysters on Káraitívu Paar and Muttuwartu Paar, I note it as follows :—

Káraitívu Paar.—Area of bed of oysters in superficial yards 428,125, which at four yards to a dive gives 107,031 dives to clean up the bed, which at an average of 15 oysters to a dive gives 1,605,465 as the number of oysters on the bed.

Muttuwartu Paar.—Area of the bed over which oysters lie 8,715,000 superficial yards, from which 16 per cent. must be deducted for spots with no oysters, that being the percentage of what may be called blank dives to dives on oysters as found by the boats; that would give the actual area of oysters 7,320,600 yards, which at four yards to a dive gives 1,830,150 as the number of dives required to clean up the bed, which at 27 oysters to a dive on the average gives 49,414,050 as the number of oysters in the bed.

The oysters on both of these banks are now about three years old. The number of the Káraitívu Paar is too small to hold out any prospect of a profitable fishery, but the Muttuwartu Paar is a very fine bed of oysters indeed, and ought to give a good fishery in March, 1890. The present bed of oysters lies between the position of Muttuwartu and Alantura Paar, as given in old records, but as it is nearest to the former I have called it by that name. There is no record, as far as I have been able to go, of either of those banks having ever yielded a fishery before. If the present bed of oysters should give a fishery, which there is no reason to doubt, the place for holding the fishery should be Dutch Bay, which is conveniently situated, being only about six miles from the centre of the bank.

Saturday, November 19.

The boats this morning went down to Kondatchchy and loaded coral stone, which they took out to the reef and deposited round the new beacon to keep boats and dhonies off it in the event of their passing close to it at night, which they sometimes do during a fishery.

Sunday, November 20.

At anchor off Silávatturai. I asked the Adigar of Músalai the meaning of Muttuwartu, the name of the bank off Káraitívu, and he said the proper name must be Muttuwaratu, which means an accumulation of pearls, so that I shall call it by that name in future.

Monday, November 21.

Washed Nos. 1 and 2 samples to-day. Sent the Active this morning to wait at the south bar for Mr. Twynam, whom I expect down here to see the sample pearls valued.

Tuesday, November 22.

Washed Nos. 3 and 4 samples to-day.

Wednesday, November 23.

Washed No. 5 sample to-day, and were drying and picking the other samples, but the weather was not favourable for drying, being cloudy and drifting light rain occasionally.

Thursday, November 24.

Employed to-day in drying, sifting, and picking the samples, but the drying was very much impeded by frequent showers of rain, which necessitated the frequent lifting and removal of the sand under shelter. The Active returned from the south bar this evening. Mr. Saxton came down in her, and he brought me a telegram from Mr. Twynam asking me when the sample will be ready for valuation, to which I replied on Saturday.

Friday, November 25.

Completed the drying and picking of the samples to-day with the exception of No. 5, which will be completed to-morrow morning. Arranged with the Adigar this evening to have the pearl merchants ready to begin the valuation to-morrow morning. Received a telegram this evening from Mr. Twynam, despatched from Jaffna at 9 this morning, telling me that he would start for Silávatturai immediately.

Saturday, November 26.

The pearl merchants were busy all day in valuing Nos. 1 and 2 samples, the former from the north part of west side of Chéval and the latter from south part of west side of Chéval. No. 1 turned

out 8 kalangies and 9$\frac{5}{8}$ manjadies of pearls, including shell pearls, valued at Rs. 225, which is equal to Rs. 18·45 per thousand; and No. 2 turned out 8 kalangies and $3\frac{7}{8}$ manjadies of pearls, including shell pearls, valued at Rs. 212, which is equal to Rs. 17·50 per thousand. The sample lifted towards the end of March last, from the same part of the bank that No. 2 has been taken, was valued at Rs. 6·91 per thousand, so that there has been an increase in value in seven months of 253 per cent. I told the valuers to-day that they ought to increase upon the last valuation in consequence of the increased market value of pearls, and they did so, raising the rate per chevoe of anie pearls from 20 star pagodas to 25. Valuing pearls is a very slow process, as four merchants were employed at two samples from 9 A.M. to 5 P.M. I hope they will be able to finish the three samples yet to be valued by to-morrow evening. The delay is caused by the washing of the pearls, in the first place, in salt-water; then in sifting them through the brass basins, or paley, as they are called by the merchants, with different sized holes in the bottom; then in classifying them; then in weighing each class; then in calculating their quality in chevoe; then in haggling over the value per chevoe or kalangy, as the case may be, which is done by pressure of the thumb under cover of a handkerchief; and finally in calculating the total weight and value.

The Active was sent off to the south bar early this morning to wait for Mr. Twynam.

Sunday, November 27.

Mr. Twynam arrived last night. The pearl merchants finished to-day the valuation of samples Nos. 3, 4, and 5. No. 3 was lifted from south part of east side of Chéval, No. 4 from centre part, and No. 5 from north part of east side of Chéval. No. 3 turned out 7 kalangies and $13\frac{6}{8}$ manjadies of pearls, including shell pearls, valued at Rs. 172, which is equal to Rs. 14·27 per 1,000 oysters. No. 4 turned out 3 kalangies and 17 manjadies of pearls, including shell pearls, valued at Rs. 78·25, which is equal to Rs. 6·81 per 1,000 oysters; and No. 5 turned out 8 kalangies and 16$\frac{2}{8}$ manjadies of pearls, including shell pearls, which is equal to Rs. 18·09 per 1,000 oysters.

Sent a telegram from Mannár to the Colonial Secretary of the valuation of the samples.

Monday, November 28.

Mr. Twynam and I decided to-day that it would be better to keep the oysters off the centre part of east side of Cheval for fishing in 1889, in view of the small outturn of pearls and low valuation of the sample, more especially as there are more oysters on the other parts of the Chéval than we are likely to be able to fish up next year; and therefore we have only recommended the publication of the other four valuation statements in the notice of the fishery, in the order in which we propose to fish the banks, viz.:—No. 1, north part of east side of Chéval; No. 2, south part of west side of Chéval; No. 3, north part of west side of Chéval; and No. 4, south part of east side of Chéval; and we have numbered the samples and valuation statements accordingly, which is different from the order in which I have previously recorded them.

We wrote to Government enclosing a notice of the fishery to begin on February 15 next, and also a copy of the valuation statements, recommending them to be published at once and widely circulated.

We have had heavy rain to-day.

Tuesday, November 29.

Started at 6 A.M. for Colombo in tow of the Active, and having the four inspection boats in tow astern of the ship to be taken down to Colombo for overhaul and repairs.

Put Mr. Twynam ashore at Pookulum, as we passed that place, as he wanted to visit Marichakatti.

Passed the north end of Káraitívu at 11 A.M., having a nice northerly breeze, and in consequence we cast off from the Active and proceeded under sail.

Passed Dutch Bay at 2 P.M. and Návakaḍu at 5 P.M., a fine fresh northerly wind blowing.

Wednesday, November 30.

Had a fine breeze off the land all last night and came along at a good speed, and in consequence we arrived in Colombo this morning.

J. DONNAN,
Inspector of Pearl Banks.

XXIX.—1887.

RAILWAY EXTENSION TO UVA.

FURTHER DESPATCHES

RELATING TO THE

PROPOSED EXTENSION TO HAPUTALÉ.

(In continuation of No. IV. of 1887.)

Ordered by His Honour the Officer Administering the Govt. to be Printed.

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RAILWAY EXTENSION TO UVA.

No. 1.

The Right Hon. Sir H. T. HOLLAND, Bart., G.C.M.G., to Governor the Hon. A. H. GORDON, G.C.M.G.

Ceylon.—No. 55. Downing street, February 20, 1888.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 24 of the 16th ultimo, relative to Railway Extension, and of your other despatches of the numbers and dates given in the margin relating to the same subject *

2. In my despatch No. 281 of the 30th of August I called your attention to the necessity of answering two questions which appeared to me to have a most important bearing on the proposed Railway Extension. The first of these questions is, whether the traffic estimate of the Railway Commission can be trusted as regards the contributions from the Badulla district. To this you reply that planters representing an acreage of 37,416 acres, out of a total of 43,579 acres under tea and coffee cultivation in that district, have given a written undertaking to send their produce to Haputalé, while of the remaining 6,163 acres 4,823 are represented by Mr. John Brown, whose action in opposing the Extension does not, according to your showing, command the support of the shareholders of the Company. You add your reasons for concluding that, whether the guarantee thus given has great or little value, there are natural obstacles which must prevent this traffic seeking any other outlet than the Haputalé station: and you explain why the Deputation referred to in my despatch of the 30th August cannot fairly claim to represent the planting community of Badulla. I recognise the strength of the evidence thus adduced, and no longer refuse to accept the traffic estimate of the Railway Commission.

3. The second question on which I desired to be furnished with your explanations was, whether the Colony could provide for the interest of the capital expenditure during construction. It does not appear to me necessary to travel far beyond the scope of the eighth and ninth paragraphs of your despatch No. 24. In those paragraphs you state that you "see no difficulty whatever in setting "aside from the ordinary revenue of the present year a sum of Rs. 90,000 to meet the charge for "interest on the debt for 1888," or the larger sum of Rs. 260,000 from the ordinary revenues of 1889 and 1890 respectively for the same purpose. You add, that the 1888 contribution of Rs. 90,000 has been placed on the Estimates "without any reduction of Establishments,—without any stinting of "ordinary expenditure,—without any diminution in the usual number of new works of irrigation "and communication annually undertaken": and you express your strong conviction that the larger appropriation required for interest during 1889 and 1890 can be made with due regard to reasonable caution.

4. To assurances thus categorically given by you under a complete appreciation of the responsibility attaching to them, I am bound to give the fullest measure of weight in deciding the important question, whether Ceylon can safely assume the large increase in her liabilities involved in the Railway Extension. I further gladly admit the steady growth of the revenue since 1883, to which most effective reference has been made in the able speech of the Acting Colonial Secretary in the debate on the Supply Bill; and I admit that I have been impressed by the figures relative to the rapid development of the tea-growing industry which you have quoted.

5. I have carefully weighed all these considerations: I have borne in mind the fact that the most able and experienced officials in the Colony share, without reserve or qualification, your confidence in the future of the Haputalé Extension, and in the ability of the Colony to incur the expense of making it. I have considered that this consensus of opinion more than counterbalances the somewhat varying views expressed on the other side. And the following is the conclusion at which I have finally arrived.

6. Were the question a new one, I should unhesitatingly have answered that it would be well to wait for two or three years, and allow the recovery of the Colony to be more complete. In any case, this line must be a speculation,—a speculation which involves a great outlay, and which depends for success on one or two industries only: and such being the case, the prudence which is demanded in undertakings by Government of this description would counsel delay. But I find the following circumstances militating against such a course. The question has long been bandied to and fro between this Office and the Colony; expectations have been roused, not lightly to be disappointed; the existing line is represented as stopping at an inconvenient point, and waiting, so to speak, to be carried on; and there is a strong local opinion to the effect that further delay will be prejudicial to the best interests of the Colony.

7. In these circumstances, I consider a certain amount of risk is a lesser evil than further delay. I accept the existing gauge for the proposed Extension, and I authorise you to carry on the line to Haputalé.

* No. 22 of January 14; Nos. 25, 26, and 29 of January 16; Nos. 31 32, and 33 of January 20, 1888.

8. It is a source of gratification to me to be able to give my approval to a scheme which you have steadily advocated for a long time past, and in the success of which the interests of all classes of the community are, in a greater or less degree, concerned. At the same time, I should regret if an impression were created that I have arrived at this decision without thoroughly appreciating the representations which have been made on the other side from various quarters, and more particularly by Mr. Ráma-Náthan. The expression of such views has appeared to me, as it appeared to my predecessors, not only worthy of respect, but of the fullest consideration; and the prolonged discussion of the question of Railway Extension has, in my opinion, gained much from the share taken in it by those who speak on behalf of the different sections of the native community.

9. I propose to address you shortly in a separate despatch on the steps to be taken to give effect to my decision, and I have instructed the Crown Agents to obtain, at the earliest possible date, a report from the Consulting Engineer on the subject.

I have, &c.,
H. T. HOLLAND.

No. 2.

The Right Hon. LORD KNUTSFORD to Governor the Hon. A. H. GORDON, G.C.M.G.

Ceylon.—No. 59. Downing street, February 27, 1888.

SIR,—IN continuation of my despatch No. 55 of the 20th of February, I think it well to state that I have not thought it necessary to send separate answers to the various despatches which you have forwarded relative to the Haputalé Railway Extension, including the memorials against it. My despatch may be taken as covering what has been written on the subject, and I request that publicity may be given to it as early as possible.

I am, &c.,
KNUTSFORD.

XXX.—1887.

THE PEARL BANKS.

REPORT

ON THE

FAILURE OF OYSTERS ON THE CHEVAL PAAR

BY

CAPTAIN J. DONNAN,
INSPECTOR.

Ordered by His Honour the Officer Administering the Govt. to be Printed.

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FAILURE OF OYSTERS ON CHÉVAL PAAR.

THE INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY.

Barque Sultan Iskander,
Silávatturai, February 19, 1888.

SIR,—I HAVE the honour to report my return to this place yesterday from the Pearl Banks.

2. I went out from here on the morning of the 6th instant to lift samples of oysters from the Chéval Paar and to buoy off the various parts of the bank for fishing, but to my deep regret I found the whole bank almost clean swept of oysters.

3. I was employed seven days in carefully going over the bank, four days on the east side and three days on the west side, with the following result :—On the north part of east side I found only about 459,000 oysters ; on centre part of east side only about 4,948,000 oysters ; on south part of east side only about 2,438,000 oysters ; and on the whole of the west side only about 493,000 oysters ; making in all about 8,338,000 oysters left on the whole Chéval out of 161,429,684 oysters estimated to be on it in November last, thus showing a loss of about 156 millions of oysters in two months.

4. On the 13th instant, when I had ascertained the state of the Chéval, I sent the Active to Mannár with a telegram to the Government Agent, Jaffna, reporting the very serious loss of oysters, which he no doubt duly communicated to Government.

5. As regards the cause of the disappearance of the oysters I found as an unmistakable fact that the oysters had been forcibly removed from the bank. The divers employed in its examination brought up from the bottom pieces of rock and large pinna shells, on which there were numerous oyster byssus attached, quite fresh-looking, showing that the oysters had only recently vacated their positions. In one spot on the centre part of the East Chéval there were obtained in ten dives made alongside the vessel only 37 oysters, but on the pieces of rock and pinna shells brought up at the same time there were counted 250 fresh oyster byssus, which would have made, had the oysters been attached, 287 oysters in ten dives, or an average of 29 nearly to a dive instead of 4.

6. I was at first inclined to suspect that the bank had been poached, as in all my experience I have never found old oysters to voluntarily quit their ground or slip their cables ; but when I considered the magnitude of the loss of oysters, and that it would have taken 100 boats an equal number of days to have removed so many oysters, that I had been in the neighbourhood so recently as November 29 last, and that in December and January the Active was on the bank as a guard vessel, also that the weather in December and January is such that people would not be likely to venture out so far off the land in open boats with the risk of being blown out into the gulf with the strong north-east winds which then prevail, I at once abandoned the idea of poaching as being untenable.

7. The divers employed at the inspection were of opinion that the oysters had been eaten up by a vast shoal of skate of the species they call "Sankoody Tyrica," or "Koopu Tyrica," which they say eat up shells and all ; even chanks are eaten up by them, and thus a bed of oysters might be cleared off by them without a trace of the cause being left behind. The divers say that the smaller species of skate called "Valvoddy Tyrica" crush oyster shells between their teeth, suck out the flesh, and reject the broken shells, thus leaving behind evidence of their depredations ; but I cannot believe in the existence of such a large shoal of the skate referred to as would be required to devour 156 millions of oysters scattered over a very large area of ground, 21,746,745 superficial yards, without leaving some evidence of the fact.

8. The engine driver of the Active, who has also charge of the vessel, reported that for eight days in December last he found when out on the Chéval Paar a very strong current running to the southward—3 or 4 knots he estimates it to have been—but it was so strong that he had to let go a second anchor to prevent the Active from dragging. I subsequently tested the effect of a current in displacing oysters by towing astern of the Active a group of 4 old oysters attached to a pinna shell. They held on for about an hour at a speed of 4 knots, but when it was increased to 6 knots they dropped off one by one. That test proved that oysters would withstand a 4-knot current for a short time, but I am inclined to believe that the strain of a 3 to 4-knot current prolonged for some days would dislodge old oysters and sweep them away. At any rate, the current reported by the engine driver of the Active appears to me to be the only plausible theory to account for the disappearance of the Chéval oysters.

9. I have searched for the missing oysters from the southern limit of the Chéval to the southward to Káraitívu island, where inquiries were made of the fishermen whether any oysters had been washed up on the beach of the island, but they had seen none ; they however confirmed the existence of a strong southerly current for some days in December, saying that their nets when laid out off the western shore were rapidly swept to the south. Search was also made between the Mótaragam Paar and Karaitívu shoal, down the west side of Káraitívu to the large coral reef which lies off Dutch Bay, and from the Chéval in a south-west direction out to the edge of the bank of soundings ; but all without avail, not a trace of the missing oysters was found anywhere.

10. The young oysters on west Chéval referred to in my report of the 1st December last were found to be still in existence in large numbers ; and it is interesting to know that they kept their ground while the old oysters were swept away ; but young oysters have much greater holding

on power in proportion to their surface than old oysters, and they would no doubt be able to hold on against a current that would carry off old ones. The fact of their existence is also against the divers' skate theory, for skates would not be likely to have devoured old oysters and left the young ones untouched.

11. I found some old oysters still remaining on the north and south parts of the Mótaragam Paar, about three millions on the north part and two millions on the south part, the latter however mixed up with oysters about a year younger. The current has evidently not affected the Mótaragam, but it being placed further inshore and to the southward than the Chéval, the current there would be likely to have less force. Indeed it is only on the extreme eastern side of the Chéval where any oysters are left, and the existence of any there is probably owing to the current losing force there by being embayed as it were by the obstruction offered to its southerly course by the island of Káraitívu and the large space of confined water between it and the mainland; whereas on the west side of the Chéval the current would have a free run to the southward.

12. Between the oysters on the Mótaragam and the remnant on the Chéval there may yet be about fifteen millions lifted, affording twenty-five or thirty days' fishing; but the resulting revenue must necessarily fall far short of what was, until a few days ago, most reasonably expected from what promised to be one of the largest and most successful fisheries on record.

J. DONNAN,
Inspector of Pearl Banks.

XXXI.—1887.

THE PEARL BANKS.

FURTHER REPORT

EXPLAINING

THE DISAPPEARANCE OF THE OYSTERS FROM THE CHEVAL PAAR,

BY CAPTAIN J. DONNAN,

INSPECTOR

(In continuation of No. XXX.)

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REPORT ON THE PEARL BANKS.

The INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY.

No. 71.

Master Attendant's Office,
Colombo, April 25, 1888.

SIR,—IN connection with my letter of the 19th February last, reporting the loss of oysters from the Cheval Paar and the probable failure of the fishery, I have the honour to report that, in consequence of the finding of some of the lost oysters after the fishery commenced, and the high prices which the oysters fetched at the Government sales, the result of the fishery proved much more remunerative than I was led to expect by the condition in which I found the Cheval Paar at the February inspection.

2. As regards the finding of the drift oysters, I was led, by the evidence of a southerly current on the banks in December, and by the most probable direction of a current at that season of the year, to believe that, if the oysters had really been carried away by currents, they would most likely be found, if found at all, to the southward or south-westward of the Cheval; and I only looked for them in those directions. But, with the exception of a few small patches to the southward, the bulk of the drift oysters were found from half a mile to three miles to the south-eastward of the east side of Cheval—a direction quite unexpected. I fully intended, however, to have searched in that direction as the fishery progressed, but the accidental finding of the first lot of drift oysters by some of the fishing boats a few days after the fishery commenced rendered any special search on my part unnecessary.

3. I forward herewith a plan of the coast from Mannár to Kutiramalai, showing all the pearl banks in the neighbourhood, the outline of bed of oysters on Cheval in November last and in February, also the spots where drift oysters were found, and the line of drift.

4. The drift oysters were found on sandy ground, piled up in long narrow ridges with scattered oysters on the intervening spaces; and a great many of them were dead. I believe all would have died within a month or two. Some oysters were found in clusters attached by their byssus to small pieces of rock, a few pounds in weight, from which they had not been dislodged, rock and oysters having been swept away together; but most of them were detached with their byssus broken short off, and no sign of a new byssus re-forming. The cause of so many oysters being found dead appears to me to have been the shock received by being torn away from their anchorage. The tearing away was most likely not a sudden thing, but a prolonged strain against the force of the current, which gradually broke the byssus thread by thread, and thus sickened the oysters beyond recovery. Whatever was the cause, I am convinced it was not natural decay from old age, as the oysters were only four and a half years old, and ought to have lived at least another year longer. I saw them first in March, 1884, when they were of an age (three to six months) that admitted of accurate judgment; and I have seen samples of them lifted every year since, showing gradual development up to their present size.

5. Out of the total number of 22,052,769 oysters fished during the fishery, 11,739,238 were fished from the Cheval and Mótarakam banks, and the remainder from the drift patches. It seemed to me, until near the close of the fishery, that the drift oysters found had all come from the east side of the Cheval, and that none of those that were on the west side had been found; but at last a number of oysters from the north part of West Cheval were found on the east side. They were known by a peculiar growth of coral on the shells found only on the N.W. Cheval oysters, and thus it was proved that the West Cheval oysters had been swept over the East Cheval. The area of the drift patches is large enough to have contained all the oysters that were on both sides of the Cheval, and I now believe that they have all been accounted for, considering the number fished, the number that may have died, and the number that may have been sanded over and hidden out of sight, of which there was some evidence in some of the dead shells being brought up with a quantity of sand inside of them. Even without such evidence, it may fairly be surmised that a current, strong enough to break oysters away from their byssus, could hardly fail to carry quantities of sand along with it also. Search was made during the fishery to the east side of Cheval, and between the S.E. end of the large drift ground and Kutiramalai, and between Kutiramalai and north end of Karaitivu island, for any further deposit of drift oysters; but none were found.

6. As regards the cause of the oysters having disappeared from the Cheval, I have now no doubt, considering the evidence afforded by the finding of some of them subsequently, that the cause may be attributed to a most unusual current both as to strength and direction. I can only account for such a current by supposing that some disturbance occurred in December in the usual strength and direction of the ocean stream that sweeps along the east and south coasts of the Island at that season. It is well known that in December the current runs strong to the southward on the east coast: Captain Robson of the ss. Serendib on one occasion found it running four knots an hour. That current follows the coast as far as Galle, whence it usually takes a W.N.W. direction, losing some of its force; but sometimes it takes a northerly direction along the west coast as far as Kalpiṭiya, and thence westward towards Cape Comorin. In December last, when the oysters were supposed to have been swept away from the Cheval, the stream, after rounding Galle, might have taken the direction of Cape Comorin, or slightly north of it, impinging on the coast between the Cape and Manapaud. The obstruction thus opposed to its onward course might have caused an off-shoot from the main stream to enter the Gulf of Mannár along the Tinnevelly coast, in which case

it would most probably have swept round the head of the gulf following the configuration of the coast, and found an outlet to the southward on the Ceylon side, where, in the vicinity of Kalpiṭiya, it probably would have curved to the westward and joined the main stream again; and thus a S.E. drift over the Cheval might be accounted for. I found some evidence of the existence of such a current in November last when at anchor off Dutch Bay. I then observed a current running to the southward at the rate of about one and a half knot for two days, ending with a change of direction to the westward, or right off the land, which at the time surprised me, but now seems capable of explanation under the circular theory above described.

7. It may seem strange how the Mótarakam oysters, only a short distance to the south of the Cheval, escaped from being swept away also; but they were no doubt protected from a south-east set of current by the Karaitivu shoal, which runs along the west side of the Mótarakam and to the north of it. It is probable also, that when the current came in contact with the shoal, its course may have been diverted by it to the southward, and that would account for the engine driver of the Active, then at anchor on the shoal, observing the current to be running south. Such a current as seems to have swept the Cheval in December last is no doubt of rare occurrence, there being no record of a previous similar visitation; but it most probably has occurred before without being observed, and may have been the cause of what seemed a mysterious disappearance of beds of oysters occasionally reported in times past.

8. I was unable to examine the Muttuvaratu Paar off Dutch Bay to see if the oysters on it had suffered by the current that destroyed the Cheval, but I propose doing so in October next, and at the same time run over the Chilaw banks, on some of which oysters may have settled since my last inspection of them. As reported in my letter of February 19 last, the west side of the Cheval is now well stocked with young oysters of about six months old, and if they remain to maturity they ought to be fishable in March, 1892. There is evidently an abundance of oyster spat in the neighbourhood of the Cheval and Mótarakam banks, as I noticed at the close of the fishery, when lifting the buoys laid down at the commencement of it to mark out those banks, that the coir rope cables of all the bamboo buoys in use were covered with oyster spat from the minutest size up to perhaps two months old, and, strange to say, that although the bamboos were immersed about two fathoms in the water, there were no spat on them; neither were there any spat found on the chain cables of other buoys in use. It would thus appear that a coir rope netting suspended in the water by the lower edge being weighted on the bottom, and the upper edge supported by floats, would be an excellent mode of procuring spat.

I am, &c.,

J. DONNAN,
Inspector of Pearl Banks.

XXXII.—1887.

THE COURTS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to consolidate and amend the Laws relating to Courts and their Powers and Jurisdictions."

Ordered by H. E. the Officer Administering the Government to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 10 cents.]

EXTRACT from the Minutes of the Legislative Council, dated January 18, 1888.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to consolidate and amend the Laws relating to Courts and their Powers and Jurisdictions":—

The Hon. G. T. M. O'BRIEN, Acting Colonial Secretary,
The Hon. S. GRENIER, Attorney-General,
The Hon. R. W. D. MOIR, Acting Auditor-General,
The Hon. J. B. A. BAILEY, Acting Treasurer,
The Hon. P. RAMA-NATHAN, } Unofficial Members,
The Hon. A. L. DE ALWIS, } Unofficial Members,
The Hon. W. W. MITCHELL, } Unofficial Members,

of whom three should form a quorum.

THE COURTS BILL.

THE Sub-Committee appointed to consider this Bill have the honour to report as follows :—

1. The Committee have had the advantage of considering the valuable suggestions which have been submitted to them from the Bar Committee and from numerous judicial officers and other members of the Public Service regarding this Bill and the Civil Procedure Bill. They have also been favoured, through the Attorney-General, with the views of some of the past and present Judges of the Supreme Court.

2. The Committee are of opinion that the proposals (1) to vest an original civil jurisdiction in the Supreme Court and (2) to raise the jurisdiction of Courts of Requests should be abandoned; and that the provisions contained in this Bill to give effect to those proposals should be omitted.

3. The Committee recommend the following amendments and additions, as calculated to improve the Bill and to make it more complete and useful :—

§ 1. For "1887" read "1888."

§ 2. Add at the end : "Where any unrepealed Ordinance incorporates or refers to any provision of any Ordinance hereby repealed, such unrepealed Ordinance shall be deemed to incorporate or refer to the corresponding provision of this Ordinance."

§ 3. In line 3, for "to such construction" read "thereto." Add :—

"An 'action' is a proceeding for the prevention or redress of a wrong."

"'Cause of action' is the wrong for the prevention or redress of which an action may be brought, and includes the denial of a right, the refusal to fulfil an obligation, the neglect to perform a duty, or the infliction of an affirmative injury."

In the definition of "judge" delete the first "and" and the word "also" in line 2, and the whole of lines 3 and 4.

§ 4. Delete "original" in line 2 of the proviso; in line 3, after "of any" insert "Imperial Statute or of any"; and in line 5 delete from after "modified" to "1859" in line 7. In line 15, after "committees" add "or councils," and after the second "or" add "of."

§ 6. Delete lines 2 and 3 and substitute "are at present respectively set out and defined by the several proclamations now in force in that behalf," and add to the proviso "and to alter the limits of any such district or division."

§ 8. Before the proviso add : "save and except the hearing in review of any case preliminary to an appeal to Her Majesty in Her Privy Council, at which the presence of three judges shall always be required in accordance with the provisions of section [41]."

§ 12. Delete lines 1 and 2 and substitute : "The chief justice shall have rank and precedence." Page 5, line 3 : "the rank and precedence," &c., delete down to "1859," and substitute "and the puisne justices shall have rank and precedence."

§ 18. Delete the proviso.

Between § 19 and § 20 insert : "It shall be lawful for the Supreme Court to appoint for any district under the seal of the said court, and such appointment at its discretion to cancel, one or more persons to administer oaths for the purpose mentioned in section 179 of the Ordinance No. of 1888, and such persons shall be styled 'commissioners to administer oaths.'"

§ 20. (1) Add after "commenced" in line 4 : "and all indictments and informations which shall be presented."

(2) Delete altogether. Delete also proviso to this section.

Before § 21 take in § 36.

After § 21 insert under a separate heading in italics :—

"Commissioners of Assize."

§ . "Whenever the Chief Justice shall represent to the Governor that it is expedient that any criminal session of the Supreme Court should be held in any circuit otherwise than by one of the judges of the Supreme Court, the Governor may, if he thinks it expedient, by commission under the public seal of the Island, from time to time appoint a judicial officer to be called "Commissioner of Assize," who shall hold office for such period, and for such criminal session or part of a criminal session of the Supreme Court as shall be specified in the said commission."

§ . "It shall be lawful for every such commissioner to hold any criminal session or part thereof of the Supreme Court appointed to be holden under the provisions of this Ordinance for which he may be appointed to act, and such commissioner during the continuance of such session or part thereof shall be invested with all the rights, powers, privileges, and immunities of a judge of the Supreme Court, and shall have and take rank and precedence immediately after the Puisne Judges of the said court."

§ "Every criminal session or part thereof of the Supreme Court to be holden before a commissioner under the authority of the foregoing provisions shall be deemed and taken to be a criminal session of the court within the meaning of this Ordinance and of the Criminal Procedure Code, in the same and in the like manner as if the same were holden by one of the judges of the said court; and all the provisions of this Ordinance and of the said Code or any other Ordinance applying, relating, or referring to criminal

sessions of the said court, or to any act, matter, or thing done or required to be done by any person with reference to, or in connection with, such criminal sessions of the Supreme Court, shall apply, relate, and refer to every criminal session or part thereof to be holden by such commissioner, and to every act, matter, or thing done or to be done by any person with reference to, or in connection with, such last-mentioned session or part thereof, in the same manner and to the same extent as if such last-mentioned session or part thereof were a criminal session of the Supreme Court holden by a judge thereof."

§ 23. In line 2, after "thereof" insert "or by a commissioner of assize duly appointed under the provisions of this Ordinance."

§ 25. In line 13, after "writing" delete to "respectively" in line 18.

§ 26. In line 6 of the proviso, after "court" add "with a jury."

§ 27. Delete and substitute: "Whenever any prisoner or accused party shall have pleaded to any indictment or information exhibited against him at any session of the Supreme Court, and it appears in evidence that the crime or offence with which such person is charged was committed without the limits of the circuit for which such session is being held, the Supreme Court shall, nevertheless, at such session proceed to try such crime or offence in such and the same manner as if such crime or offence had been committed within the limits of such circuit."

§ 30. In line 11, after "arrested" add "without a warrant."

§§ 34 and 35. Delete.

§ 37. Page 12, delete line 5, and in line 6 for "herein" read "hereinafter." After "police court" in line 11, add "or by the court of any Municipal Magistrate."

§§ 39 and 40. Consolidate thus: "All appeals in civil cases from the decision of a single judge sitting as in the last preceding section provided, and from judgments and orders of the several district courts of the Colony, shall be heard before two at least of the judges of the said court. Appeals from judgments in criminal cases pronounced and made by district courts, and all appeals from courts of requests and police courts, may be heard, and all powers given to the Supreme Court in respect of such appeals may be exercised by any one judge of the Supreme Court. In the event of any difference of opinion between such two judges, the decision of the said court shall be suspended until all the three judges shall be present, and the decision of such two judges when unanimous, or of the majority of such three judges in case of any difference of opinion, shall in all cases be deemed and taken to be the judgment of the Supreme Court. All appeals from the decision of one judge of the Supreme Court sitting as in the last preceding section provided shall be heard by the other two judges of the said court, and the decision of such two judges when unanimous shall in all cases be deemed and taken to be the judgment of the Supreme Court therein; but in case of any difference of opinion the original judgment shall stand affirmed."

"Nothing in this section contained shall preclude any judge of the Supreme Court sitting alone in appeal from reserving any appeal for the decision of two or more judges thereof."

§ 41. Alter the heading by inserting after "*to*" "*Her Majesty in.*"

§ 45. Line 5, before "judge" insert "district." Delete (*e*). Lines 13 and 14 from the bottom, delete "cause, suit, action," and line 9 from the bottom, delete "or to the Supreme Court." Bring up the first seven lines of § 46 as an addition. In the second line of the addition for "the last preceding" substitute "this," and delete lines 3 and 4, and down to "required" in line 5.

§ 46. Begin from the last line of page 16, "In any case." In line 2 of page 17, delete "so as aforesaid." In lines 5 and 6 of the proviso delete the bracket. In line 7, for "think" read "thinks."

§ 47. Supply marginal note: "Notice to Attorney-General on application for a transfer."

§ 49. Delete the second paragraph and substitute: "Unless and until rules in that behalf shall be framed under the provisions of section [52], the practice of the court as to the obtaining and issuing of writs of *Habeas Corpus*, and as to the return thereto, shall apply to cases under this and the last preceding section."

§ 52. Page 19, line 3 from the bottom, after "provided" insert "and all rules, orders, regulations, or forms that may hereafter be framed by the Supreme Court under the provisions of any other Ordinance empowering them in that behalf, and whether or not special provision is made in any such Ordinance for the mode in which sanction is to be given to any such rules, orders, regulations, or forms."

§ 52. Page 20, in line 8, for "published" read "proclaimed," and in line 10 for "publication" read "proclamation." Add to this section: "Provided always that nothing herein contained shall be deemed in any way to affect the validity of any existing rules, orders, regulations, or forms heretofore duly made and promulgated by the Supreme Court under any authority empowering them in that behalf, except in so far as any such rules, orders, regulations, or forms are by this Ordinance expressly repealed or modified."

§ 53. Line 7, after "contemplated" add "or for any other purpose."

§§ 54 and 55. Delete.

§ 56. Amend as follows:—

Line 4, at the end, delete "of such district." Line 6, before "court of requests" delete "and," and add after it "police court"; in line 8, delete "and" before "commissioner" and add "and police magistrate" before "respectively." After "appoint" in last line of page 20 add: "Provided always that nothing in this section contained shall be taken in any way to restrict or curtail any power possessed by a police magistrate under the provisions of any law for the time being in force to hold court at any convenient spot within the limits of the division for which he may be appointed." Delete "Provided that" in the last line of page 20, and commence a new section "It shall."

§ 60. In line 1, delete "district court or." Transfer this section between §§ 85 and 86.

§§ 61, 62, 63. Delete.

§ 67. Line 1, after "requests" insert "or police court."

§ 68. Delete.

§ 69. Lines 8 and 9, delete "guardians, cestuique trusts and trustees," and insert "wards, over the estates of cestuique trusts, and over guardians and trustees."

§ 70. Lines 2–5, delete "in which" down to "Rs. 5,000 and." Page 24, lines 2 and 3, delete "either wholly or as to any part."

§ 75 Line 12, after "court" add "or where any application for such probate or letters of administration shall have been made to any court."

§ 77. Lines 1 and 2, delete "or additional district judge."

§ 78. Lines 9 and 10, delete "by the mutual consent or connivance of the parties," and substitute "intentionally."

§ 82. In line 4, delete "and fifty" and in line 7, "wholly or as to any part."

§ 83. Add at the end "or by a married woman in the same manner as if she were a *femme sole*."

§ 84. Lines 4 and 5, delete "however, to the limitation in the next section contained; and subject also."

Insert between §§ 87 and 88, under heading "*Justices of the Peace*"—

§ . "The Governor and the officers (whether holding office permanently or temporarily) enumerated in Schedule IV. hereto shall be *ex-officio* justices of the peace for the Island or for such portion thereof respectively as is shown by the statements in the said schedule severally set opposite to their respective denominations. It shall be further lawful for the Governor, from time to time by notice in the *Government Gazette*, to appoint such persons as shall be named in such notice to act as justices of the peace for the Island, or within such districts or portions thereof as to the said Governor shall seem expedient. Every justice of the peace shall take and subscribe the oaths of allegiance and office in the form by Ordinance No. 7 of 1869 prescribed, before some district judge, commissioner of requests, or police magistrate, and every such judge, commissioner, or magistrate is hereby empowered and required, upon application in that behalf, to administer the same and to enter in the records of his court that the said oaths were duly administered and taken before him, and forthwith to transmit a copy of every such entry to the registrar of the Supreme Court, to be entered in the records of that court. And the Governor may at any time remove any person so appointed to act as such justice of the peace from his said office."

§ . "Every justice of the peace shall have power, and is hereby required to administer any oath which any person may be legally entitled to make before a justice of the peace."

§ 89. Line 1, after "any" delete "original court except a police court," and substitute "district court or court of requests."

§ 91. Line 3, after "matter" insert "whether on an inquiry preliminary to committal for trial or otherwise." Line 10, after "case" insert "except on an inquiry preliminary to committal for trial."

Insert after § 91 :—

§ . "Except with the consent of both parties thereto, no judge shall be competent, and in no case shall any judge be compellable, to exercise jurisdiction in, or to hear, try, or determine any cause, suit, action, or prosecution, or to hold any inquiry into, or commit any person for trial upon, any charge to or in which he is a party or personally interested: and except as is by the provisions of this Ordinance and of Ordinance No. of 1888 provided with regard to the hearing of judgments in review preliminary to appeals to Her Majesty in Her Privy Council, no judge shall hear an appeal from, or review any judgment, sentence, or order passed by, himself. When any judge so a party or personally interested is a judge of the Supreme Court, the cause, suit, action, or prosecution to or in which he is so a party or interested, or in which an appeal from his judgment shall be preferred, shall be heard, tried, and determined by some other judge or judges of the said court: in every other case, the district court, court of requests, or police court of any adjoining district or division shall have jurisdiction to hear, try, and determine any such cause, suit, action, or prosecution, or to inquire into and commit for trial upon any such charge."

"The question whether a judge is personally interested in a case shall be decided by the principles of the Law of England applicable to the same question in England."

Schedule II. See Appendix A for a revised copy of this schedule, which should be retained, if possible, as part of the Bill.

Schedule III. Rule 5, in last line but one, insert "or Oxford" before "University."

Rule 10, read "Rs. 300" for "Rs. 350."

Rule 14, line 2, read "40" for "50." Line 3, insert "and 50 per cent. of the aggregate of the maximum marks on all the papers" after "paper," and delete "in it."

Rule 20, add after "Law of Evidence," "Best on Evidence, Stephen's Digest."

Rule 22, read "40" for "50" and insert after "subject" "and 50 per cent. of the aggregate of the maximum marks on all the papers" Delete "in it" in last line.

Rule 35. Delete lines 18 and 19.

Rule 37. Read "Rs. 400" for "Rs. 500."

Rule 40, line 2, insert "in the aggregate" before "50," and in line 3 delete "on each subject" and "in it."

Rule 43, read "Rs. 400" for "Rs. 500."

Rule 46. After "Law of Evidence" insert "Taylor on Evidence, Stephen's Digest." Line 1 on page 43, insert "in the aggregate" before "50" and omit "on each subject." Line 2, same page, omit "in it."

Add as Schedule IV., Schedule C to Ordinance 11 of 1868.,

G. T. M. O'BRIEN.
S. GRENIER.
R. W. D. MOIR.
P. RA'MA-NA'THAN.
A. L. DE ALWIS.
W. W. MITCHELL.

Legislative Council Chamber,
April 23, 1888.

APPENDIX A.

SCHEDULE II.

Limits of Districts and Divisions.

DISTRICTS.

Western Circuit.

District.	Court held at	Limits of Jurisdiction.
Colombo	... Colombo	... The Harbour, and the town of Colombo within the Municipal limits, and the revenue district of Colombo, excluding so much of the Alutkúru kóralé as is situate north of the Jáçla-oya, and the Vidáne villages of Bemmulla and Galgomuwa of the Siyané kóralé.
Negombo	... Negombo	... The Harbour, and town of Negombo, and the revenue district of Negombo, and so much of the Alutkúru kóralé as is situate north of the Jáçla-oya, and the Vidáne villages of Bemmulla and Galgomuwa of the Siyané kóralé.
Kalutara	... Kalutara	... The revenue district of Kalutara.
Ratnapura	... Ratnapura	... The revenue district of Ratnapura
Chilaw	... Chilaw	... The revenue district of Chilaw.
Puttalam	... Puttalam	... The revenue district of Puttalam.

Midland Circuit.

Kandy	... Kandy	... The Central Province.
Kégalla	... Kégalla	... The revenue district of Kégalla
Kurunégala	... Kurunégala	... The Seven Koralés.
Badulla	... Badulla	... The Province of Uva.
Anurádhapura	... Anuradhapura	... The North-Central Province.

Northern Circuit.

Jaffna	... Jaffna	. The revenue district of Jaffna.
Mannár	... Mannár	... The revenue district of Mannár
Mullaittívu	.. Mullaittivu	.. The revenue district of Mullaittivu
Vavuṇiya Viláṇkulam	Vavuṇiya Viláṇkulam	... The revenue district of Vavuṇiya Viláṇkulam.
Trincomalee	.. Trincomalee	... The harbour, and the revenue district of Trincomalee.
Batticaloa	... Batticaloa	... The harbour, and the revenue district of Batticaloa.

Southern Circuit.

Galle	... Galle	... The harbour, and the town of Galle within the Municipal limits, and the revenue district of Galle.
Mátara	... Matara	... The revenue district of Mátara
Taṇgalla	... Taṇgalla	... The revenue district of Hambantoṭa.

DIVISIONS

	Court (Police Court and Court of Requests) held at	
		Western Circuit.
Colombo	... Colombo	... The judicial district of Colombo as hereinbefore defined, excluding those portions of the Salpiṭi, Hewágam, and Siyané Kórales which are hereinafter respectively assigned to the several divisions of Pánadure and Avisáwélla.
Negombo	... Negombo	... The judicial district of Negombo as hereinbefore described, excluding the Hápiṭigam kóralé.
Panadure	... Panadure	... The Rayigam kóralé, Pánadure toṭamune, and that portion of the Salpiṭi kóralé lying south of the village Angulána and of the road leading from the Wéwala ferry to the Lunáwa bridge near the tenth milepost on the Galle road, and thence to the Mámpe road and from it to Mattégoḍa.
Kalutara	... Kalutara	. The judicial district of Kalutara as hereinbefore defined, excluding the Rayigam kóralé and Pánadure toṭamune
Avisawélla	. Avisawélla & Pasyála	... The Hapitigam koralé, the Uḍugaha pattu of Siyané kóralé and the Uḍugaha pattu of Hówágam korale, so much of the Gaṇgaboḍa pattu of the Siyané kóralé as is situate east of the road from Haṇwella to Attanagalla; (concurrently with the Minor Courts of Colombo) the Meḍa pattu of Hewagam korale; (concurrently with the Minor Courts of Kégalla) the Three Kóralés and Lower Bulatgama; and (concurrently with the Minor Courts of Ratnapura) the Kuruwiṭi kóralé
Ratnapura	... Ratnapura and Rakwána	The judicial district of Ratnapura as hereinbefore defined.
Chilaw	... Chilaw and Márawila	... The judicial district of Chilaw as hereinbefore defined
Puttalam	... Puttalam	.. The judicial district of Puttalam as hereinbefore defined
		Midland Circuit.
Anurádhapura	... Anuradhapura	.. The judicial district of Anurádhapura as hereinbefore defined.
Badulla	.. Badulla	... The judicial district of Badulla as hereinbefore defined, except such portions thereof as are herein expressed to be included within the jurisdiction of the Police Court and Court of Requests of Haldummulla and Nuwara Eliya respectively.
Dumbara	... Paṇwila and Urugala	... The revenue divisions of Pata Dumbara and Uḍa Dumbara
Galagedara	... Galagedara	... In the Central Province, the revenue division of Tumpané and Hárispattu, except Kalugammanasiya pattu; in the North Western Province, Mádure kóralé, Wéuḍa kóralé, Gannamaye kóralé, Gandálaye kóralé, and Héwáwissé kóralé.
Kurunégala	.. Kurunégala	... The judicial district of Kurunégala as hereinbefore defined, except such portions thereof as are herein expressed to be included within the jurisdiction of the Police Court and Court of Requests of Galagedara
Kégalla	... Kégalla	... The judicial district of Kégalla as hereinbefore defined. (The jurisdiction of these courts over the Three Kóralés and Lower Bulatgama is concurrent with that of the courts at Avisáwélla.)
Gampola	... Gampola & Pussellawa	The revenue division of Uḍapaláta, the villages of Deviyanéwela, Aranáyaka, Aramasaláwa, Dambelawęwa, Kehelpannala, and Bulatgama; the coffee estates Bókanda, Gaḍalessa, Wakkattetęnna, Roslin, Alpiṭikanda, Góma-adika, Kouniboḍa, Puranawela, Kękunigoḍa, Franklands, and Panápiṭiya; the revenue division of Uḍa Bulatgama, except that part of the Ambagamuwa kóralé herein expressed to be within the jurisdiction of the Police Court and Court of Requests of Hatton, and the Pallépané kóralé of Kotmalé.

Division.	Court (Police Court and Court of Requests) held at	Limits of Jurisdiction.
Haldummulla	... Haldummulla	... That portion of the revenue district of Badulla which comprises the Kandapallé, Wellawáya, and Kóngala Bintenna kóralé of the Kandapallé division, the Maha and Dambawini paláta of Udukinda, and so much of Kumbalwela paláta as lies to the south of the road from Ratnapura to Badulla, and to the west of the road *via* Ella from Badulla to Hambantota.
Hatton	... Hatton	... Those portions of Ambagamuwa kóralé of the revenue division of Uda Bulatgama and of the Udapané kóralé of the revenue division of Kotmalé contained within the following boundaries :— *North.*—The Dimbula gap (between the 13th and 14th mileposts on the main road from Náwalapitiya to Nuwara Eliya), northern boundary of Kelawatta estate, short cut round Dimbula to junction at Hinmal-oya, the Hinmal-oya, Kotmalé-ganga, northern boundaries of Hunugala or Yoxford and Wattagoda estates, a direct line from Wattagoda to the ridge, and along the forest ridge to the Great Western Peak. *East.*—A straight line from the watershed to the boundary between Wanggi-oya and Galkandawatta estates, and along the boundary of these estates to the Nánu-oya. *North-East.*—The Nánu-oya (river), Dimbuldanda-oya (river) to the western boundary of Abbotsford, thence along the eastern boundary of Lorne estate, northern boundary of Cymru, Tanggakelé, by the Maha Eliya ridge above Tanggakelé and Kellyhill estates, and the eastern boundary of Kellyhill to its junction with Dambagastaláwé-oya, Dambagastaláwé-oya (river) to the railway gorge, thence along the Sudugala ridge to the Horton Plains by the watershed. *South.*—The boundary between the Central and Western Provinces: from near the Horton Plains trigonometrical station No. 2 along the Kirigalpotta watershed to the spur of the ridge dividing Dimbula and Dikoya, thence along the watershed to the gap on the bridle road from Balanggoda to Dikoya, and the continuation of this watershed by the Etamorawa Peak, Dotalukanda, to the peak "Bena Samanalagala." *West.*—The boundary between the Central and Western Provinces, viz., the watershed by Adam's Peak to a point on the ridge opposite to the south-western corner of Elfindale estate, thence a straight line to the estate, and along its north-western boundary to the Maskeliya-ganga, thence along the northern boundary of Laxapana estate (title plan 45,094) and of title plans 105,476 and 105,475, called Alu-oya Egodakelé, and on to the ridge which forms the watershed between the valleys of the Kehelgamuwa-oya and Maskeliya ganga, thence along the watershed, which is also the boundary of Aberdeen estate, to its junction with Lovat. *North-West.*—The southern boundary of Lovat estate (title plan 105,875) to Kehelgamuwa-oya, southern boundary of title plan 105,876, and Killin estate (title plan 109,907) to Sevelagalkanda trigonometrical station, southern boundary of Adelade estate (title plan 109,634) to the western boundary of Trafalgar estate (title plan 44,494) and Pitcorthy, thence along northern boundary of Glenalva to near the 13th milepost on the main road to Dikoya, and across the Mahaveli-ganga and railway line, thence along the northern boundary of Watawala to Templestowe, the northern boundary of Rozelle to the stream on the south-western boundary of Wighton estate, along the western boundary of Wighton, and thence along the forest ridge of Rilágala, the boundary between Union and Kellawatta, and the Queensbury estate to the Dimbula gap.
Kandy	... Kandy	... The revenue divisions of Udunuwara, Yatinuwara, Páta Héwáhéta, and the Kulugammanasiya pattu of Háristpattu.
Mátalé	... Mátalé	... The revenue district of Mátalé.
Nuwara Eliya	... Nuwara Eliya and Maturata	The revenue divisions of Uda Héwáhéta and Walapané and that part of the Udapané kórale of the revenue division of Kotmalé not herein expressed to be included within the jurisdiction of the Police Court and Court of Requests of Hatton; and those parts of Udapaláta and Yatipaláta of the revenue division of Udukinda contained within the following boundaries :— *South-West and South.*—Maha Eliya ridge between Calsay and Kellyhill estates, eastern boundary of Kellyhill to its junction with the Dambagastaláwa-oya, the Dambagastaláwa oya to the railway gorge, thence along the Sudugala ridge and the Totapola ridge to the crossing of the bridle path from Nuwara Eliya. *East.*—Bridle path from Nuwara Eliya to the Horton Plains to where it first reaches and crosses the Dambagastaláwa oya below Totapola, a line drawn thence to the Ambawela lower éla, the courses of the said éla, and a line drawn from it to the 57th milepost on the Nuwara Eliya-Badulla road. *North-East and East.*—The Nuwara Eliya-Badulla road to the boundary of the Nuwara Eliya revenue district, thence a straight line to the centre of the ridge forming the boundary of Walapané above Gracelyn estate.
		Northern Circuit.
Jaffna	... Jaffna and Mallákam	... The town of Jaffna and the revenue divisions of Valikámam north, east, and west, and Púnakari. (The Police Court of Jaffna has concurrent jurisdiction with those of Point Pedro and Kayts.)
Point Pedro	... Point Pedro and Chávakachchéri	The revenue divisions of Vadamiráchchi, Tenmiráchchi, and Pachchilipallai.
Kayts	... Kayts	... The islands within the judicial district of Jaffna as hereinbefore defined.
Mannár	... Mannár	... The judicial district of Mannár as hereinbefore defined.
Mullaittívu	... Mullaittívu	... The judicial district of Mullaittívu as hereinbefore defined.
Vavuniya-Viláṇkulam	... Vavuniya-Viláṇkulam	... The judicial district of Vavuniya-Viláṇkulam as hereinbefore defined.
Trincomalee	... Trincomalee	... The judicial district of Trincomalee as hereinbefore defined.
Batticaloa	... Batticaloa	... The judicial district of Batticaloa as hereinbefore defined.
		Southern Circuit.
Galle	... Galle	... The judicial district of Galle as hereinbefore defined, excluding such portion thereof as is hereinafter expressed to be included within the jurisdiction of the Minor Courts at Balapitiya.
Balapitiya	... Balapitiya	... Bentota-Walalláwiti kóralé and the northern division of the Wellaboda pattu of Galle, being that bounded on the south and east by the Hikkaduwa river, the Gonápinuwela canal, and the principal road to Halpatota.
Mátara	... Mátara	... The judicial district of Mátara as hereinbefore defined.
Tanggalla	... Tanggalla	... Giruwá pattu east and Giruwá pattu west.
Hambantota	... Hambantota	... Mágam pattu.

XXXIII.—1887.

CIVIL PROCEDURE BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to consolidate and amend the Laws relating to the Procedure of the Civil Courts."

Ordered by H. H. the Officer Administering the Government to be Printed.

Colombo:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 15 cents.]

EXTRACT from the Minutes of the Legislative Council, dated January 18, 1888.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to consolidate and amend the Laws relating to the Procedure of the Civil Courts":—

The Hon. G. T. M. O'BRIEN, Acting Colonial Secretary,
The Hon. S. GRENIER, Attorney-General,
The Hon. R. W. D. MOIR, Acting Auditor-General,
The Hon. J. B. A. BAILEY, Acting Treasurer,
The Hon. P. RAMA-NATHAN, The Hon. A. L. DE ALWIS, The Hon. R. A. BOSANQUET, The Hon. W. W. MITCHELL, } Unofficial Members,

of whom three should form a quorum.

CIVIL PROCEDURE BILL

THE Sub-Committee appointed to consider this Bill have the honour to report as follows :—

1. The Committee have given their best consideration to this important measure, and have largely adopted the suggestions which have reached them from the Bar and from the other sources indicated in their report on the Courts Bill.

2. The Committee recommend the following amendments and additions to the Bill :—

§ 4. Omit.

§ 6. Omit the words "to such construction" in lines 3 and 4, and read "thereto."
In the definition of "original court" omit the words between "includes" and "district courts."
In the definition of "decree" put the sentence within brackets in small type.
Add to the section the definition of "action" and "cause of action" as agreed to in the interpretation clause of the Courts Ordinance.

§ 8. Correct the marginal note thus : "Procedure : to be regular or summary."

§ 10 (*c*). Omit "or part of it."

§ 11. Line 6, omit after "pending" to "place" in line 9 ; in line 12, after "matter" to "aforesaid" in line 13. On page 5, line 4, delete all except "such court and," and in line 5 delete "or place."

§ 13. Line 4, for "to recover" read "in respect of."

§ 15. Line 4, for "matter" read "cause of action."

§ 17. Line 6, for "plaintiff's expense" read "expense of the party applying so to sue or defend."

§ 28. Line 9, after "court" insert "and after notice to the proctor."

§ 32. Lines 9 and 11, for "attorney" read "proctor." Line 14, for "understood" read "appeared to understand."

§ 35. Line 2, for "any" read "the."
Illustration, line 3 : for "1887" read "one of those years." Line 4, for "1888" read "the other year."

§ 36. For "*Rule* (*a*)," "*Rule* (*b*)," read "(1)," "(2)."

§ 41. In last clause, line 3, after "action" insert "for a specific chattel, or to establish, recover, or enforce any right, status, or privilege, or" ; and after "approximately," in last line, insert "the value of the chattel, right, status, privilege, or."

§ 47, page 13, line 4, delete, and read "officer authorised by the court in that behalf." In the second half of the section, for "(*a*), (*b*), (*c*), (*d*)" read "(*g*), (*h*), (*i*), (*j*)."

§ 48, top of page 14, for "7" read "9."

§ 49. Omit in the last two lines the words "and shall be liable to an appeal to the Supreme Court."

§ 50. Last line but two, omit "registrar, or."

§ 54. In second line, omit "or other" and substitute "promissory note, cheque, or any."

§ 56. Line 4, omit "registrar, or."

§ 67. Add to the end of the section : "but without prejudice to the plaintiff's right to proceed under sections 642, 643, and 644."

§ 70. Line 4, for "jurisdiction" read "colony."

§ 75. Line 2, delete "appearing but." Line 3, after "appearance" add "and answer." Line 6, at the end, add "or upon the plaintiff's consent."

§ 78. In last clause, omit "and shall be liable to an appeal to the Supreme Court."

§ 79. In second line, omit "(if any)," and insert after "or" "if the plaintiff has no proctor shall be." In last line add : "upon application by such plaintiff or plaintiffs."

§ 79. Line 2, delete "registrar, or."

§ 80. Line 2, for "further pleading" read "pleading after answer." Line 11, same.

§ 81. Delete the first sentence, and read : "Forthwith on the expiration of the time allowed for the filing of the defendant's answer, or, where a replication is permitted, on the last day of the time allowed for filing such replication, and whether the same is filed or not, the court shall appoint a day for the hearing and determination of the action, and shall give notice thereof to the parties."

§ 82. Delete the second sentence.

§ 85. Line 11, for "one month" read "fourteen days." Line 25, for "suit" read "action."

§ 87. Line 2, after "decree" insert "*nisi*."

§ 89. Line 2, delete "on that." In last two lines, omit "and shall be liable to an appeal to the Supreme Court."

§ 94. Last line, for "attested by the signature of" read "initialled by."

§ 95. Delete "(Chapter XVI.)"

§ 96. Add to this section: "For the purposes of this section 'opposite party' means a party between whom and the party interrogating an issue has been raised."

§ 100. Line 4, insert "scandalous or" before "irrelevant."

§ 106. Lines 3 and 4, for "plaint, answer" read "pleadings."

§ 109. Line 2, for "plaint, answer" read "any pleading."

§ 116. Line 4, delete from after "with" down to "produced," and read "some number or letter sufficient to identify it." Delete the next sentence, and read: "The judge shall then make an entry on the record to the effect that such document was proved against or admitted by (as the case may be) the person against whom it is used, and shall in such entry refer to such document by such number or letter in such a way as to identify it with the document so proved or admitted."

§ 117. Delete.

§ 121. Add: "A list of witnesses shall be filed in court by the party applying for such summonses, after notice to the other side, and within such time before the trial as the judge shall consider reasonable, or at any time before the trial with the consent of the other side appearing on the face of such list."

§ 122. Add: "Provided that in the case of a witness residing within four miles of the court at which his attendance is required, no such payment shall be made nor security given: and provided further that the making of any such payment and the giving of any such security shall in no case be a condition precedent to the issue of a summons, but in every case (except the case of a witness residing within four miles of the court) where summons issues without such payment having been made or security given, the witness shall be informed on the face of the summons that such is the case, and that it is not obligatory on him to attend."

§ 123. Add, "if he demands the same"

§ 126 Add: "If money has been deposited or security given for his expenses under the provisions of section 122, the summons shall contain a statement to that effect."

§ 131. Line 9, after "may" insert "in its discretion either issue a warrant for the apprehension of such witness, or may."

§ 133 Line 7, after "rupees" insert "and." Lines 8 and 9, delete from "and" to "rupees."

§ 141. Add: "Except in so far as the same may be hereby expressly repealed or modified."

§ 142. Line 3, delete all except first word.

Chapter XX. Insert before § 146 the following:—

"146. On the day fixed for the hearing of the action, or on any other day to which the hearing is adjourned, if the parties are agreed as to the question of fact or of law to be decided between them, they may state the same in the form of an issue, and the court shall proceed to determine the same. If the parties, however, are not so agreed, the court shall, upon the allegations made in the plaint, or in answer to interrogatories delivered in the action, or upon the contents of documents produced by either party, and after such examination of the parties as may appear necessary, ascertain upon what material propositions of fact or of law the parties are at variance, and shall thereupon proceed to record the issues on which the right decision of the case appears to the court to depend.

"Nothing in this section requires the court to frame and record issues when the defendant makes no defence.

"147. When issues both of law and of fact arise in the same action, and the court is of opinion that the case may be disposed of on the issues of law only, it shall try those issues first, and for that purpose may, if it thinks fit, postpone the settlement of the issues of fact until after the issues of law have been determined.

"148. If the court is of opinion that the issues cannot be correctly framed without the examination of some person not before the court, or without the inspection of some document not produced in the action, it may adjourn the framing of the issues to a future day to be fixed by the court, and may compel the attendance of such person or the production of such document by summons or other process.

"149. The court may, at any time before passing a decree, amend the issues or frame additional issues on such terms as it thinks fit."

§ 150. Delete the first paragraph of this section and insert the following in its place:—

"The party having the right to begin shall state his case, giving the substance of the facts which he proposes to establish by his evidence."

And add the following explanation to the same section:—

Explanation 2.—The case enunciated must reasonably accord with the party's pleadings, *i. e.*, plaint or answer, as the case may be. And no party can be allowed to make at the trial a case materially different from that which he has placed on record, and which his opponent is prepared to meet. And the facts proposed to be established must in the whole amount to so much of the material part of his case as is not admitted in his opponent's pleadings.

§ 149. Explanation. Line 7, delete "pretty nearly," and read "fairly," and delete "exact."

§ 160. Add, "and the answers to such questions shall be made to appear on the face of the record as having been given to the court"

§ 164. Delete in line 1, "or."

§ 168. Delete in line 1 "similarly," and begin "If."

§ 165. Insert full-stop at the end of line 3, and delete the rest.

§ 171. For the first four and a half lines read: "No witness shall be called on behalf of any party unless such witness shall have been included in the list of witnesses previously filed in court by such party as provided by section 121."

§ 174. Last paragraph, after "the evidence so taken" add "may," and delete from "shall" in the same line to "then" in last line but one.

§ 179. For "commissioners" read "commissioner."

§ 180. Delete the first line, also "and" in second line, and insert the following in lieu thereof:—
"The court upon the evidence which has been duly taken, or upon the facts admitted in the pleadings or otherwise, and after."

§ 188. Line 4, for the final "such" read "the." Line 5, for "not exceeding" read "of." Lines 5 and 6, delete "as the court deems reasonable"; and the same in last line but two.

§ 192. Last line but one, after "rate" add "not exceeding 9 per cent."

§ 201. Read thus: "The secretary or chief clerk of the court shall at all times furnish to any person applying for the same, and supplying the necessary stamp, copies of the proceedings in any action, or any part thereof; or upon such application and production of such stamp shall examine and certify to the correctness of any such copies made by such person."

§ 210. Line 3, after "secretary" add "or chief clerk."

§ 214 (*a*). After "apparel" add "beds and bedding." (*c*). Delete "furniture," and after "library" add "necessary for the carrying on of the judgment-debtor's profession or business."

§ 221. In last two lines, omit "and such order shall be liable to an appeal to the Supreme Court."

§ 223. Line 5, for "with" read "within"; for lines 12 and 13 read: "If by reason of the debtor's absence no demand for payment is made, or in the event of any such demand when made not being complied with, the fiscal shall."

§ 224. Line 5, for "213" read "218."

§ 226. Delete the last paragraph, and insert as two new sections the following:—

§ 231. "A debtor prohibited under clause (*a*) of the last preceding section may, upon the *ex-parte* application of the judgment creditor, be summoned by the court to show cause, on a day fixed in the summons, why he should not pay to the judgment creditor the debt due from him to the judgment debtor, or so much thereof as may be sufficient to satisfy the judgment. If such debtor does not dispute the debt due or claimed to be due from him, and fails within such time as may be allowed him by the court to pay into court the amount due from him to the judgment debtor, or an amount equal to the judgment, or if he does not appear upon summons, then the court may order execution to issue, and it may issue accordingly to levy the amount due from such debtor, or so much thereof as may be sufficient to satisfy the judgment.

"The costs of any application and of any proceedings arising from, or incidental to, any such application as aforesaid shall be in the discretion of the court.

§ 232. "Payment made by, or execution levied upon, such debtor in manner provided in the last preceding section shall be a valid discharge to him as against the judgment debtor to the amount paid or levied, although such proceeding may be set aside or the judgment in respect of which any payment or levy is made may be reversed."

§ 228. Line 8, delete "registrar." (*b*) End of line 2, add "execute" Last line but two, for "notice" read "application."

§ 230. Amend paragraph 2 by inserting after "The notice," "shall specify the parties to the action, the judgment-debtor, the dates of judgment and seizure, and the name, situation, and boundaries of the land seized, and." To the end of the same paragraph add: "A copy of such notice shall forthwith be transmitted by the fiscal to the registrar of lands of the district in which such land is situate, and such registrar shall keep a register of the particulars contained in such notice. To cover the cost of such registration, the fiscal shall be entitled to levy a fee of one rupee for each district in which he has seized land, and such fee shall be recoverable by sale of such land. No seizure shall be valid unless registered within one week, and in case the seizure is removed the fiscal shall certify such removal to the registrar who shall register the same."

At end of section after "Chapter" add "LI"

§ 231. Delete.

§ 243. Last line but one, for "at the discretion of the court" read "not exceeding Rs. 50."

§ 250 (1). Delete (*f*) and (*h*), and for "(*g*)" read "(*f*)." (11) line 5, delete "both," and after "and" insert "four."

Line 6, after "one of" insert "each of."

Line 7, delete "another."

Line 8, delete "the third."

Line 9, delete "the fourth."

§ 253. Read the second sentence thus: "When the proceeds do not exceed the sum of seven thousand five hundred rupees, the fiscal or deputy fiscal shall recover a fee of 3 per cent. on the proceeds actually recovered on return thereof, made to the court in respect of every sale and resale of movable, and 2 per cent. on the proceeds of sale of immovable property, belonging to the debtor."

In line 9, after "proceeds" add "whether of movable or immovable property."

Line 23, after "expenditure" add "including the hire of tom-tom beaters and watchers."

§ 255. Line 3, after "declaration" insert "in every case where the price does not exceed Rs. 100, the full amount of, but in every other case."

§ 256. Begin by the added words "Except where the price exceeds Rs. 100," and in line 3 for "other" read "public."

§ 258. Marginal note: "Fresh notification on resale."

§ 262. Add at the end : "In which latter case the property shall again be advertised as before."

§ 264. Line 6, add after "Government Agent's" "or Assistant Government Agent's."

§ 265. Line 2, for "made" read "reported."

§ 267. Line 4, for "if he so desires" read "if the court thinks fit."

§ 271. Line 3, for "judgment-debtor" read "person impeaching the sale."

§ 277. Line 8, after "apply" insert "by petition." Same line, after "chapter" insert "or any person establishing to the satisfaction of the court."

§ 280. Lines 6 and 7, delete "(with or without interest as the court may direct)" and in line 10, "and of the interest (if any) allowed by the court."

§ 281. In fifth line from top of page 59, insert "in duplicate" after "conveyance"; and in next line omit "in duplicate" and insert in place thereof "or such other form, or expressed in such terms as the courtmay deem expedient." At the end of first paragraph for "Government" read "the Governor."

Add at the end : "Such diagram or map shall be prepared by a competent surveyor licensed by the fiscal for that purpose, and such surveyor shall be an officer of the fiscal within the meaning of section 319."

§ 283. Add the following at the end of this section : "and the cost (to be fixed by the court) of such proclamation shall in every case be prepaid by the purchaser."

§ 285. In third line, after "may" add the following : "at his discretion, and if provided with the necessary funds therefor by the purchaser or by the judgment creditor or debtor."

§ 286 (2). Line 3, for "prevent" read "permit."

§ 302. Add, "and where the writ is to be executed in another district, such further sum as the judge thinks sufficient to cover the expenses of his transport to the court issuing the writ."

§ 306 (*c*). For "294" read "312."

§ 313. Add the following at the end of this section : "and the cost (to be fixed by the court) of such proclamation shall in every case be prepaid by the judgment creditor."

§ 317. Last line but one, for "sections 316 and 317" read "section 321 and this section."

§ 319. Line 8, after "may" insert "within one month."

§ 326. Line 7, delete from "decree" to end of sentence, and substitute "or that execution was stayed by the decree holder at the request of the judgment debtor."

§ 327. In third line, add "legal" before "representatives"; and in the fifth and sixth lines substitute "those claiming under" for "the representative in interest of." Add the following to this section :— "For the purposes of this chapter the term 'legal representative' shall mean an executor or administrator, or in the case of an estate below the value of Rs. 1,000, the next of kin who have adiated the inheritance. Provided, however, that in the event of any dispute arising as to who is the legal representative, the provisions of section 394 shall, *mutatis mutandis*, apply."

§ 331. Line 2, for "the adjournment" read "the date to which the sale is adjourned."

§ 332. Line 3, delete "And," and add to the end of the section "and no such order shall be made until after payment of all fiscal's fees then due."

§ 333. Add "legal" before "representatives" in second line.

§ 334. Omit (*a*) in explanation 3, and substitute (*a*) and (*b*) for (*b*) and (*c*).

Explanation 3 (*c*) : add after "definite" "and unconditional."

§ 338. Delete, and substitute : "If any money payable under a decree is paid out of court, or the decree is otherwise adjusted in whole or in part to the satisfaction of the decree holder, he shall certify such payment or adjustment to the court whose duty it is to execute the decree. The judgment-debtor may also by petition inform the court of such payment or adjustment, and apply to the court to issue a notice to the decree holder to show cause on a day to be fixed by the court why such payment or adjustment should not be recorded as certified. And if after due service of such notice the decree holder fails to appear on the day fixed, or having appeared fails to show cause why the payment or adjustment should not be recorded as certified, the court shall record the same accordingly. No such payment or adjustment shall be recognised by the court unless it has been certified as aforesaid."

§ 343 (*a*). Insert :—

"Nothing in this chapter contained shall be taken in any way to repeal or invalidate the provisions of Ordinance No. 5 of 1877 with regard to the issue or execution of writs issued under the said Ordinance. But whenever by the provisions of the said Ordinance any investigation is required to be held or act to be done in or about the issue or execution of any writ which, under the provisions of this chapter, is required to be held or done by the court issuing such writ, such investigation shall be held and such act shall be done by the registrar-general of lands or any special commissioner appointed under the provisions of such Ordinance, and such registrar-general or commissioner (as the case may be) shall in every such case and for all such purposes be held and taken to be the court within the meaning of this chapter.

§ 344. Line 3, after "property" add "or for the sequestration of any property."

§ 353. Omit the last three lines and insert the following in lieu thereof : "to supply the necessary stamps therefor." In line 5, for "may" read "shall."

§ 357. Line 4, for "an authenticated copy of the same" read "a copy of the same authenticated by the fiscal or deputy fiscal."

§ 360. Line 1, after "fiscal" add "or deputy fiscal."

§ 362. For this section read "The charges payable by suitors shall, except where otherwise expressly provided, be levied by means of stamp duties in manner prescribed by and subject to the exemptions contained in the Stamp Ordinance for the time being in force." Delete (1) and (2).

§ 363. Lines 3 and 4, delete "in person or by his proctor." Line 6, after "court" insert "or by some officer specially deputed by the court for that purpose."

§ 369. Line 6, delete all but the last three words.

§ 374, page 82, line 4, for "twenty-four" read "forty-eight."

§ 384. Add: "For the purposes of this chapter legal representative shall mean an executor or administrator, or, in the case of an estate below the value of Rs. 1,000, the next of kin who have adiated the inheritance."

§ 388. Line 3, after "court" insert "either to stay the action until the question has been decided in another action, or to decide at once," and omit in line 3 the words "to decide."

§ 393. Insert before this, as 399, 395.

In line 4 of § 393, after "but" insert "the plaintiff or"; in line 5, for "the" read "a," and delete "bankrupt."

§ 395. In line 1, for "twelve months" read "twelve months in the case of a district court or six months in the case of a court of requests."

§ 399. Line 1, after "adjusted" add "wholly or in part," and in lines 2 and 3, after "in respect to" add "the whole or any part of." At the end add: "so far as relates to so much of the subject-matter of the action as is dealt with by the agreement, compromise, or satisfaction."

§ 407. Add as § 414.

"If at the institution or at any subsequent stage of an action it appears to the court that the defendant, or where there are more defendants than one, that any defendant, is residing out of the jurisdiction of the court, the court may in its discretion, and either of its own motion or on the application of such defendant, order the plaintiff or plaintiffs, within a time to be fixed by the order, to give security for the payment of all costs incurred and likely to be incurred by such defendant."

§ 416. Add to (*a*) "or is a person whom the court, in accordance with the customs and manners of the country, sees reason to exempt from personal appearance in court."

§ 422. Delete.

§ 423. Line 7, for "(B), (C), and (D)," read "(B) and (C)."

§ 428. Line 9, after "peace" insert "or commissioner to administer oaths."

§ 429. Last line, for "when" read "whom."

§ 434. Last line but three, insert full-stop after "plaints," and delete the rest. Add as § 441: "Attached to every such application shall be an affidavit sworn or affirmed by the applicant and by two headmen or respectable persons of the place at which the applicant resides, to the following effect:—

"(*a*) That the applicant is a pauper:

"(*b*) That he has not within the two months next before the presentation of his application disposed of any property fraudulently, or with a view to obtain the benefit of this chapter:

"(*c*) That he has not entered into any agreement with reference to the subject-matter of the proposed action under which any person has obtained an interest in that subject-matter."

§ 437. Delete "(*a*), (*b*), (*c*)" and the sentences to which they are attached as headings. Delete "(*d*)" and bring up the sentence to which it is attached as a continuation of line 4.

For the second paragraph, substitute: "If such proctor shall certify that the applicant has not a good cause of action, the court shall reject the application," and continue: "But if he shall certify that the applicant has a good cause of action, the court shall," &c., as in line 2 of paragraph 3, deleting the first line and a half.

§ 443. Add marginal note: "Application to defend as a pauper."

§ 451. Line 4, for "two months" read "one month"

§ 460. In line 10, insert "manager" after "secretary."

§ 463. In line 1, insert "trustees" before "executors." Same in line 5. Line 2, after "action" insert "by or."

§ 464. Add marginal note: "Executors and administrators liable in costs."

§ 465. Correct marginal note thus: "Husband of executrix not to be made party"

§ 471. Lines 7 and 8, delete "and is not a party to the action."

§ 511. Line 7, for "therein" read "in section 516."

§ 513. Line 2, for "that" read "the claim," and for "to all others" in line 3, "to that of all others."

§ 514. In line 14, after "by" add "affidavit with the will as an exhibit thereto, or."

§ 520, at end of paragraph 1, add, "and shall name the next of kin of the deceased as respondents."

§ 522. Add: "Provided that the court may in its discretion direct such other mode of advertisement in lieu of such publication as to it seems sufficient."

§ 527. Line 5, delete all the words from "petition" to end of section, and substitute "that he has such an interest in the estate of the deceased person as entitles him in the opinion of the court to make such application."

§ 528. Line 6, after "made" insert "to take the oath of an executor or administrator according to the form prescribed in schedule hereto, and thereafter."

§ 529. (*f*) In line 4, for "committee" read "manager of the estate."

§ 533. Delete.

§ 534. Line 6, insert full-stop after "rupees" and delete remainder of section.

§ 537. Line 4, after "satisfaction" insert "and it being made to appear that there is not resident, within the local limits of his jurisdiction, some next of kin or other person entitled to administration of the estate of the person so dying."

§ 544. Add at the end, "and may at the same time pay into court any money which may have come to his hands in the course of his administration to which any minor or minors are entitled."

§ 555. Line 2, after "either" read "by his proctor or counsel, or in person," &c.

§ 559. Line 5, for "legal heir" read "heir-at-law."

§ 563. Line 2, for "within six months" read "within a time to be fixed by the court." Lines 12 and 13, for "any public officer" read "the Attorney-General."

§ 568. Line 7, for "the produce thereof when realised" read "the proceeds thereof when realised in such manner as the court shall direct."

§ 570. Omit this section, and in lieu thereof insert the following: "In all cases in which this chapter is applicable, the procedure herein provided shall be followed, anything in Ordinance No. 1 of 1873 to the contrary notwithstanding."

§ 573. Line 8, for "is of small value" read "is below the value of Rs. 1,000."

§ 579. Line 8, for "six months" read "a time to be fixed by the court."

§§ 586, 587. Delete.

§ 590. Delete.

§ 593. Lines 4 and 5, delete "a petition to be presented at the same time with," and end the section with "plaint" in line 5.

§ 598. Line 18, delete "Supreme."

§ 603. Line 9, for "her husband had been then dead" read "she had died unmarried."

§ 605. Marginal note, for "reserved" read "reversed."

§ 608. Lines 2 and 3, delete "and whether or not she has obtained an order of protection."

§ 623. Add, "and such plaint shall also be supported by an affidavit of the plaintiff verifying the statements contained therein."

§ 630. Line 3, for "41" read "45."

§ 636. Omit in sixth and seventh lines "to take out administration to the estate and effects of such deceased mortgagor," and insert in lieu thereof, "to apply to the court to appoint an administrator to the estate and effects of such deceased mortgagor under the provisions of chapter XXXVIII."

§ 638. Last line but two, for "case" read "cure."

§ 644. In ninth line, omit "and fifty" after "hundred."

§ 647. In seventh line, omit "and fifty" after "hundred."

§ 651. Line 2, for "hereinafter" read "hereinbefore."

§ 652. Line 3, same amendment.

§ 656. Line 3, after "shall" insert "except in cases where an injunction is prayed for in a plaint in any action."

§ 658. Line 4, after "application for the same" add "together with the accompanying affidavit."

§ 661. Line 9, omit "not exceeding one thousand rupees."

§ 663 (1). Line 2, after "inspection" add "and survey."

§ 666. Add to this section: "or if he has left a recognised agent, such notice may be given to such agent."

§ 671. Line 2, for "terminate" read "determine."

§ 680. Last line, for "from" read "form."

§ 681. Line 1, after "date" insert "of receipt of notice."

§ 690. Line 4, after "may" insert "within six months of the making of the award."

§ 697. Line 1, omit "the Supreme or any district court."

§ 726. Line 2, after "revoked" insert "or who is desirous of resigning his office."

§ 730. After the first sentence insert: "Provided that a concise statement of such debt with an intimation of the petitioner's intention so to prove the same has been inserted in the petition."

After chapter LIX., to "Of Appeals" add "and Revision" in the heading.

Add as § 750:—

"The Supreme Court may call for and examine the record of any case, whether already tried or pending trial, in any court, for the purpose of satisfying itself as to the legality or propriety of any judgment or order passed therein, or as to the regularity of the proceedings of such court, and may upon revision of the case so brought before it pass any judgment or make any order which it might have made had the case been brought before it in due course of appeal instead of by way of revision."

§ 748. Line 3, delete "in the court of requests" Lines 10 and 12, before "chief clerk" insert "secretary or."

§ 749. Lines 21 and 22, delete "where such court of first instance is a district court or court of requests."

In the last sentence of the first paragraph for "But where the court of first instance is the Supreme Court" read "But where an appeal is taken from the decision of a judge of the Supreme Court sitting alone as in section 40 of Ordinance No. of 1888, provided."

In the second paragraph, lines 3 and 4, delete "when such court is a district court or court of requests," and in lines 4 and 5, for "but where such court is the Supreme Court, such return shall be filed" read "but where the appeal is from the decision of a judge of the Supreme Court so sitting alone as in the said last-mentioned Ordinance provided such return shall be made to and filed."

§ 751 (c). Line 3, delete "without any argument or narrative."

§ 758. Correct misprint in heading of Chapter.

§ 759. In line 7, for "precident" read "precedent."

§ 761. Line 1, for "preferred" read "forwarded." Line 16, delete "at least ten" and read "in the case of appeals from district courts fourteen," and in line 17, for "six complete" read "seven."

§ 766. Add, "or to order a new or further trial on the ground of discovery of fresh evidence subsequent to the trial."

§ 768. Add to the first paragraph: "Provided that in the case of appeals from the decision of a judge of the Supreme Court sitting alone as in Ordinance No. of 1888 provided, when the two judges hearing the appeal do not agree, the original judgment shall stand affirmed."

§ 769. Page 161, lines 2 and 3, delete "where the court of first instance is a district court or court of requests." Line 5, for "such court" read "the court of first instance" For the last sentence read "where the appeal is from the decision of a judge of the Supreme Court sitting alone, such court," &c.

§ 772. Last line but one, after "definitive" add "judgment, decree, or."

§ 780. Line 3, for "their" read "that."

§ 788. Line 7, after "section" insert "790."

§ 791 For the last clause read, "and the procedure on any such appeal shall follow the procedure laid down in the Criminal Procedure Code regulating appeals from orders made in the ordinary criminal jurisdiction of district and police courts."

§ 796. For the last two lines read "is provided in the Criminal Procedure Code for carrying into effect sentences of fine or imprisonment passed by any court in the exercise of its ordinary criminal jurisdiction."

§ 792½. "The following sentences of fine or imprisonment, as the case may be, may be imposed on conviction for contempt under this chapter by the following courts respectively, viz.:—

"By the Supreme Court.—Imprisonment, either simple or rigorous, until the contempt is purged, or for such period as the court directs, and fine not exceeding 5,000 rupees in addition thereto or in lieu thereof.

"By a district court.—Fine not exceeding 1,000 rupees, or imprisonment, either simple or rigorous, for a period not exceeding six months.

"By a court of requests.—Fine not exceeding 100 rupees, or imprisonment, either simple or rigorous, for a period not exceeding three months."

§ 797. Last sentence, for "require the same judgment" read "entitle the plaintiff to the same kind of relief."

§ 798. Lines 7 and 8, delete "in the margin thereof." Line 9, delete "A in the schedule C. R. hereto" and read "—— in the schedule hereto."

§ 799. Line 3, delete "by him."

§ 801. Line 1, read "at the place and on the day." Line 2, delete "for the return thereof."

(*a*) Line 3, delete "B in schedule C. R. hereto" and read "—— in the schedule hereto."

(*b*) For "forthwith plead to the same" in line 2, read "plead to the same forthwith, or within such time as the court on cause shown may allow."

§ 802. For this read: "The answer shall contain a specific denial of each material allegation of facts which the defendant does not admit, and any such allegation not so denied shall be taken to be admitted. It," &c., as in second sentence.

§ 803. Line 5, delete "not exceeding four days."

§ 805. Add: "Where new matter is set up by way of defence either in the answer or in the reply to the claim in reconvention, every material allegation of facts shall be deemed to have been denied by the opposite party."

§ 806. Delete.

§ 807. Line 2, delete "defence."

§§ 808, 809. Delete.

§ 810. Line 2, after "unless" insert "such proof discloses a new cause of action or."

§ 811. Lines 5 and 6, delete "by oath or affirmation."

§ 813 (*a*). Line 2, delete "and fifty" and all words after "rupees."

§ 814. Insert full-stop after "plaintiff" in line 7, and delete the rest of the section.

§ 816. Line 2, after "affidavit" add "or otherwise." Line 9, delete "(1)." Line 10, for "fourteen days" read "six weeks." Delete second proviso.

§ 817. Line 2, after "discretion" add "or." Alter marginal note thus: "Court may on adjournment order examination of witnesses."

§ 819. Omit and insert under the heading of "Interrogatories," § 821: "Sections 94 to 100, both inclusive, shall not apply to courts of requests."

§ 820. Delete in last line "D in the schedule C. R hereto" and read "—— in the schedule hereto."

§ 821. Delete the words "omitting section 121."

§ 825. Line 4, delete the words "omitting section 180."

§§ 118, 119, 120. Transpose these sections to the end of chapter XVI., and alter them as under:—

§ 118. Line 2, delete "of requests."

§ 119. "No person other than an interpreter of the Supreme Court, or a Government sworn translator, or an interpreter of a district court or court of requests, shall be deemed to be a translator of any court unless he shall have received a certificate from the judge or commissioner of such court that he is competent to fulfil the duties of a translator, and shall have taken an oath before such judge or commissioner faithfully to perform the duties of his office."

§ 120. "No such translator as aforesaid shall be entitled to have or recover in respect of fees for any translation any sum of money in excess of the following rates, viz.:—

For every folio of 120 words ...	... 33 cents.
For every fractional part of a folio ..	... 33 cents."

§ 831. Delete.

3 The Committee also recommend the adoption of the accompanying Schedule of Forms.* The proposed scale of costs to be paid to Advocates and Proctors in the various Civil Courts of this Island cannot be revised until the Stamp Duties leviable under the new system of procedure have been determined.

G. T. M. O'BRIEN.
S. GRENIER.
R. W. D. MOIR.
P. RA'MA-NA'THAN.
A. L. DE ALWIS.
R. A. BOSANQUET.
W W MITCHELL.

Legislative Council Chamber,
April 23, 1888.

* Printed with the Amended Bill

XXXIV.—1887.

STATEMENT

SHOWING

THE AMOUNT OF SCHEDULE FEES RECEIVED BY THE SEVERAL FISCALS

DURING

THE QUARTER ENDED MARCH 31, 1888.

(In continuation of No. XXVII of 1887.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price 5 cents.]

FISCALS' SCHEDULE FEES.

STATEMENT showing the Amount of Schedule Fees received by the Fiscals of the several Provinces, agreeably to the 16th clause of the Ordinance No. 4 of 1867 and Ordinance No. 43 of 1884, during the Quarter ended March 31, 1888.

Province and District.	Quarter ended March 31, 1888.							
	January.		February		March.		Total	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
Western.								
Colombo	373	5	438	95	601	95	1,413	95
Negombo	55	55	99	5	113	60	268	20
Kalutara	108	15	86	90	140	55	335	60
Ratnapura	15	5	19	0	35	25	69	30
Kégalla	24	80	32	65	30	0	87	45
Avisáwélla	2	55	10	40	18	30	31	25
Total ...	579	15	686	95	939	65	2,205	75
North Western.								
Kurunégala	65	60	76	80	46	75	189	15
Chilaw	18	25	82	10	70	85	171	20
Puttalam	2	80	5	60	2	40	10	80
Kalpitiya	5	0	1	0	1	50	7	50
Total ...	91	65	165	50	121	50	378	65
Eastern.								
Batticaloa	148	0	193	40	141	65	483	5
Trincomalee ...	54	60	28	35	33	45	116	40
Total ...	202	60	221	75	175	10	599	45
North Central.								
Anurádhapura	8	40	5	75	6	55	20	70
Central.								
Kandy	171	60	225	0	153	45	550	5
Mátalé	20	95	35	75	19	65	76	35
Nuwara Eliya	9	70	9	70	13	10	32	50
Hatton	28	90	20	95	47	55	97	40
Total ...	231	15	291	40	233	75	756	30
Uva.								
Badulla	44	30	53	10	46	45	143	85
Northern.								
Jaffna	348	40	324	50	272	65	945	55
Mannár	27	5	63	15	29	60	119	80
Mullaittívu	2	60	0	70	4	5	7	35
Vavuniya-Vilúpkulam ...	1	35	1	75	10	20	13	30
Total ...	379	40	390	10	316	50	1,086	0
Southern.								
Galle	208	5	239	60	249	20	696	85
Mátara	121	60	160	15	151	50	433	25
Tangalla	49	40	62	80	51	0	163	20
Hambantota	1	75	6	50	1	50	9	75
Balapitiya	31	10	48	40	53	95	133	45
Total ...	411	90	517	45	507	15	1,436	50

RECAPITULATION.

	Quarter ended March 31, 1888. Rs.	c.
Western Province	2,205	75
North-Western Province	378	65
Eastern Province	599	45
North-Central Province...	20	70
Central Province	756	30
Province of Uva	143	85
Northern Province	1,086	0
Southern Province	1,436	50
Total ...	6,627	20

XXXV.—1887.

CORRESPONDENCE

ON THE SUBJECT OF

THE REPAIR OF THE MÁLIGÁKANDA RESERVOIR

OF THE

COLOMBO WATERWORKS.

Ordered by His Excellency the Governor to be Printed.

Colombo:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1888.

Price with Plans, Re. 1.]

MÁLIGÁKANDA RESERVOIR.

The COLONIAL OFFICE to Governor the Hon. A. H. GORDON, C.C.M.G.

No. 247.—*Ceylon.* Downing street, August 3, 1888.

SIR,—I AM directed by the Secretary of State to transmit to you for your information, with reference to his despatch No. 228 of the 20th ultimo, the documents specified in the annexed Schedule.

I have, &c.,
ROBERT G. W. HERBERT.

SCHEDULE.

Date.		Description of Document
July 28	...	The Crown Agents to the Colonial Office.
August 3	...	The Colonial Office to the Crown Agents.

(Copy of Correspondence respecting Sir John Fowler's report on the Máligákanda Reservoir.)

Enclosure No. 1.

The CROWN AGENTS to the COLONIAL OFFICE.

Downing street, London, July 28, 1888

SIR,—WITH reference to your letter of the 20th instant, conveying to us Lord Knutsford's approval of the arrangements we proposed to make with Sir John Fowler as to the repair of the Máligákanda Reservoir of the Colombo Waterworks, I have the honour to forward a copy of that Engineer's report on the subject.

2. It appears from the 12th and following paragraphs of this report that Sir John Fowler considers that a reservoir of the design adopted and of the material employed ought never to have been exposed to the changes of temperature of the Ceylon climate, and that the failure is due partly to this cause and partly to the fact that the concrete floor provided ought not to have been expected to prove water-tight. He recommends as remedies that, after the walls have been relieved from the effects of the strains they have experienced, they should be protected by an earthen embankment, and that the floor and walls should be lined with asphalte. The cost of these works is estimated at Rs. 140,000, but inasmuch as it is clearly to be inferred from Sir John Fowler's report that he considers that both the earthen embankment and the asphalte lining ought to have been included in the original design, it is justifiable to regard a large proportion of this amount as not properly chargeable to repairs. It appears doubtful, however, whether the Colonial Government, which has already paid heavily for the successive failures, in delays and in cost of repairs, will derive much satisfaction from this consideration.

3. Sir John Fowler recommends that Mr. Burnett be entrusted with the superintendence of the work, and that a skilled foreman be sent from England to superintend the asphalting. The Government of Ceylon has more than once expressed its appreciation of the energy and ability displayed by Mr. Burnett in the management of the Waterworks contract, and it will be satisfactory to it to learn that Sir John Fowler sees no reason to withdraw confidence from him. We propose, with Lord Knutsford's concurrence, to arrange for Mr. Burnett's return to Ceylon as soon as possible, and to send out the asphalte foreman when he informs us that the services of such a man are required.

4. It will be observed that Sir John Fowler estimates that the works will be completed in twelve months from their commencement.

I have, &c.,
M. F. OMMANNEY.

Sub-Enclosure in Enclosure No. 1.

SIR JOHN FOWLER to the CROWN AGENTS FOR THE COLONIES.

2, Queen square place,
Westminster, July 24, 1888.

GENTLEMEN,—HAVING read and considered the various documents forwarded to me on the 12th instant by your instructions, I now submit to you the following report on the remedial measures which, in my opinion, are required to complete the important work of the Máligákanda Reservoir so as to satisfy the original intention of permanent solidity and water-tightness.

2. The documents sent to me are not only detailed descriptions of the original design and the subsequent modifications of the work, but furnish such a clear and full account of the three

failures which have unfortunately occurred, that it would be difficult for an engineer to have more complete information to guide him in devising a remedy.

3. Mr. Burnett has given me a description of the whole of the Colombo Waterworks, from which it is obvious that the Máligákanda Reservoir is indispensable for the proper working of the water-supply to the inhabitants of Colombo, and that its efficient restoration is a work of necessity.

4. The character and dimensions of the Máligákanda Reservoir have been so frequently described in the various documents already in your possession, that it is not necessary for me to repeat the description in detail, and especially as the plans and sections which accompany this report to illustrate my recommendations contain all requisite information.

5. It does not appear that until the reservoir was filled at the time of the first failure in October, 1885, any doubt had been entertained as to the sufficiency of the work for its intended object, and bearing in mind that the work was designed by one of the most experienced engineers of the day, that the section of the wall will bear the test of theoretical and practical criticism as to its sufficiency to withstand the pressure of the water, that the materials and workmanship were excellent, and that the foundation was on a strong cabook (as the excavations and borings clearly prove), there appeared to be no real cause for doubt or anxiety, provided, of course, the reservoir was water-tight.

6. And yet a failure, and a very serious one, did occur on October 16, 1885, and it so happened that on calling at Colombo on my way from Australia in April, 1886, I heard of the failure and took the opportunity of visiting the site of the works, and had the good fortune subsequently to see Mr. Burnett and hear his explanations. But of course I had neither the official position nor the requisite time for making any investigations into the matter so as to discover the cause.

7. The modifications and additions to the work which resulted from this failure were useful and judicious, and increased the strength of the walls in a small degree, and that of the flooring (which had shown signs of weakness) in a considerable degree, although, as subsequent events have shown, they did not correct, or provide against, the special cause which really produced the failure.

8. The second failure occurred on December 13, 1886, and the reports from Mr. Burnett respecting it are significant and instructive: for, after speaking of the reparations which followed the first failure, he evidently suspects mischief from the weakening of the walls from strains developed by varying temperature, and he suggests that such mischief might be obviated by putting an earthen embankment round the outside of the walls.

9. Nothing, however, seems to have been done after the second failure except to cover with asphalte the curved concrete footings which had been put in after the first failure.

10. The reservoir was filled again in February, 1887, when a third failure took place, more serious and extensive than either of the previous failures.

11. Such are the facts, shortly stated, regarding the three failures of the Máligákanda Reservoir, and I now proceed to state my opinion of the cause of these failures and the work of restoration required.

12. It is not common for a large reservoir with 40 ft. depth of water to be raised altogether above the surface of the ground, but the circumstances of the Colombo water-supply rendered it imperative, and this fact, together with the position selected, no doubt determined the use of concrete for the work.

13. The walls of the reservoir are sufficient from their form and sectional area to resist the pressure of water when the reservoir is quite full, provided the materials and workmanship are of a high character, and that no leakage or other extraneous cause is brought into injurious operation.

14. I consider the evidence of the high character of the work to be conclusive, not only from the description and my general personal inspection, but also, and indeed chiefly, from the nature and position of the cracks in the several failures, which, in my opinion, are quite inconsistent with bad materials or imperfect workmanship in the concrete masonry.

15. If, then, the failures have not arisen from the design or from the quality of the work, the only remaining possible causes are the insufficiency of foundations or extraneous injury.

16. The sufficiency of foundations for any structure depends on the weight brought upon them, and on their nature and consequent capacity to sustain the weight.

17. The weight of the walls on their foundations, according to the original design, when not subjected to the pressure of the water in the reservoir, averaged less than two tons per square foot, but with the water in the reservoir the weight on the foundations underwent a great change in consequence of the pressure of the water against the wall relieving the inside edge of the wall and throwing a greater pressure on the outer part, with the result that the minimum weight would become less than one ton, and the maximum between three and four tons per square foot. The earthwork embankment at the back of the wall will exercise a counteracting effect to some extent to that of the water, and reduce the maximum weight on the foundations to about two and a half tons per square foot, or less than half of that which may be safely put on ordinary clay, whilst the cabook on which the reservoir is founded possesses far greater resistance than ordinary clay.

18. The evidence on the facts points to the same conclusion, and I find the Committee, of which Colonel Clarke was Chairman, state in their report that "in their opinion there has been no appreciable subsidence of the structure." Mr. Burnett is also quite satisfied, after repeated examinations, that no settlement whatever has taken place.

19. Under these circumstances, it appears to me that the foundations may be dismissed from the category of possible causes of the failures, or of having contributed to them in any degree.

20. With regard to extraneous mischief operating on the walls, it is a fact well known to engineers that concrete, and especially concrete of the highest or monolithic character, expands and contracts measurably with changes of temperature; and when freedom of expansion and contraction is rendered impossible by the nature of the work, then special precaution is required to prevent cracks and mischief from the strains thereby induced, and, I need scarcely add, when water-tightness is involved special precautions become of still greater importance, as the smallest crack may be fatal.

21. The walls of the Máligákanda Reservoir are four connected sides of a square, and therefore free expansion or contraction is obviously impossible, and consequently any tendency to expansion and contraction produced by changes of temperature must be taken up in the walls themselves by strains.

22. It becomes, therefore, a question of the highest importance to ascertain the amount of strain which can be produced in the walls by changes of temperature to which they are subjected, because it is clear that when the strain is one of tension by reason of contraction or by the effort of contraction, the power of resistance of the wall to the pressure of the water is weakened to the extent of the strain produced.

23. In the work at the Forth bridge, where, from its great magnitude, the question of expansion and contraction of all materials used is of vital importance, I have made special experiments over a considerable period of time to ascertain the expansion and contraction of concrete under varying temperatures.

24. Applying the facts obtained by this experiment to the circumstances of the walls of the Máligákanda Reservoir, and with the tables of temperature supplied to me by Mr. Burnett, and checking the result from other independent sources, I am of opinion that the resisting power of the walls against the pressure of the water has been frequently diminished to two-thirds, or even less, of their normal strength.

25. But inasmuch as the top of the walls is only about one-third of the thickness of the bottom, and therefore affected in a greater degree by the action of the sun, and as the surface of the wall is sometimes so hot as to produce numerous small surface cracks, it is manifest that the actual effect of temperature upon the structure will be even greater than the result which calculation, founded on average variations of temperature, would indicate.

26. The nature of the failures is in every case consistent with the weakening of the wall by such an extraneous agency, and it may be assumed as a certainty that similar failures to those which have occurred would be repeated, even if the damaged parts were thoroughly repaired, unless the injurious effect of variations of temperature was effectually provided against.

27. Assuming, then, that the walls are of insufficient strength under the present conditions of exposure to the direct action of the sun, and have not a large margin of strength even independently of such action, it is desirable to strengthen them as well as protect them against future damage.

28. The simple and obvious mode of doing this is to construct an earthwork embankment round the walls, which, by its counteracting pressure, will supply an ample margin of strength to the walls themselves, and at the same time maintain such moderate limits of variation of temperature in the work as to prevent any injurious strain. The material required for this embankment can be conveniently and economically obtained from the ground immediately adjoining the site of the reservoir.

29. As regards structural strength, therefore, nothing could be more satisfactory than the results that will be produced by this earthwork embankment, provided that the walls were not under the influence of the varying temperature to which they have been subjected; but there can be no doubt, in my opinion, that they are at the present moment sustaining strains from this cause, and therefore I consider it essential (although I much regret the necessity) to have every wall cut through so as to relieve the strain, and then built up again, in the same manner as the cracks in the walls were previously cut out and new work substituted after the first failure. And with regard to the crack across the flooring, a similar proceeding of cutting out of old work and substituting new must be adopted.

30. The earthwork will be brought up *pari passu* with the new concrete masonry of the walls, and when both are completed a condition of perfect structural security against the maximum pressure to which the walls can be subjected will have been attained.

31. But, unfortunately, another and very important work still remains to be done, viz., a provision for water-tightness, and this is epecially required in consequence of the disturbance to the walls and floor by the various failures and reparations.

32. For this purpose I consider it absolutely essential that an asphalte covering should be added to the existing concrete floor and walls. The floor would be dealt with in the usual way by means of two thicknesses of rock asphalte mixed with a proper proportion of bitumen, and finished with a smooth silicious surface; and this will give water-tightness combined with elasticity, so that if the numerous cracks in the concrete floor were to occur again no mischief would ensue; but after the work previously described has been carried out it is practically impossible that cracks, large or small, can ever occur again.

33. The asphalte protection to the walls is a more special work, and for which a thin concrete wall will be desirable for the protection of the asphalte against the masonry walls, as shown on the drawings.

34. The conditions under which the asphalte will be applied are peculiarly favourable, as no part of the floor or walls can ever be exposed to the direct action of the sun, and the variations of temperature will always be small, so that asphalte of sufficient softness or elasticity can be employed, and thus secure water-tightness under all circumstances.

35. I should have been very glad to have been able to recommend a restoration at less cost, but I feel strongly there should be no risk whatever incurred in this important and indispensable work, either in structural strength, freedom from extraneous mischief, or in water-tightness.

36. I do not advise the employment of a general contractor to undertake the work recommended in this report. Mr. Burnett can easily superintend and carry it out as he did the previous restorations, especially as regards the cutting out and filling in concrete masonry in the walls; and respecting the earthwork, the usual solid local manner will be the best, taking care to have the top and slopes carefully sodded and the surrounding parts neatly trimmed, so as to prevent any washing away during the rainy season.

37. Contracts should, however, be made for the asphalte and the bitumen, and it will be necessary to employ an experienced and skilful man from England to mix and apply the asphalte.

38. I should personally desire to entrust the execution of these works to Mr. Burnett, who has been engaged upon the Reservoir and Waterworks from their commencement, and who has executed the work carefully and well; and although failures have taken place from the effect of exposing large surfaces of concrete masonry to changes of temperature, I think it would be unfair to hold Mr. Burnett personally responsible for the failures or to withdraw confidence from him.

39. I estimate the cost of the masonry, asphalte, and earthwork described in this report, including also the completion of the arching and incidental works connected therewith, and all local

engineering and superintendence, at Rs. 140,000. These works may be completed in twelve months from the time of their commencement.

40. The drawings attached to this report are marked A and B :—Drawing A, plan of reservoir showing masonry in walls and flooring and earthwork embankments ; Drawing B, section of reservoir showing asphalte work and earthwork.

I have, &c.,

JOHN FOWLER.

Enclosure No. 2.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing street, August 3, 1888.

GENTLEMEN,—I AM directed by Lord Knutsford to acknowledge the receipt of your letter of the 28th ultimo, enclosing Sir John Fowler's recommendations with regard to the repair of the Máligákanda Reservoir of the Colombo Waterworks, and I am to state that his Lordship approves of your intention to arrange for Mr. Burnett's early return to Ceylon and to send out the asphalte foreman when required.

I am, &c.,

R. H. MEADE.